JUNE 1992

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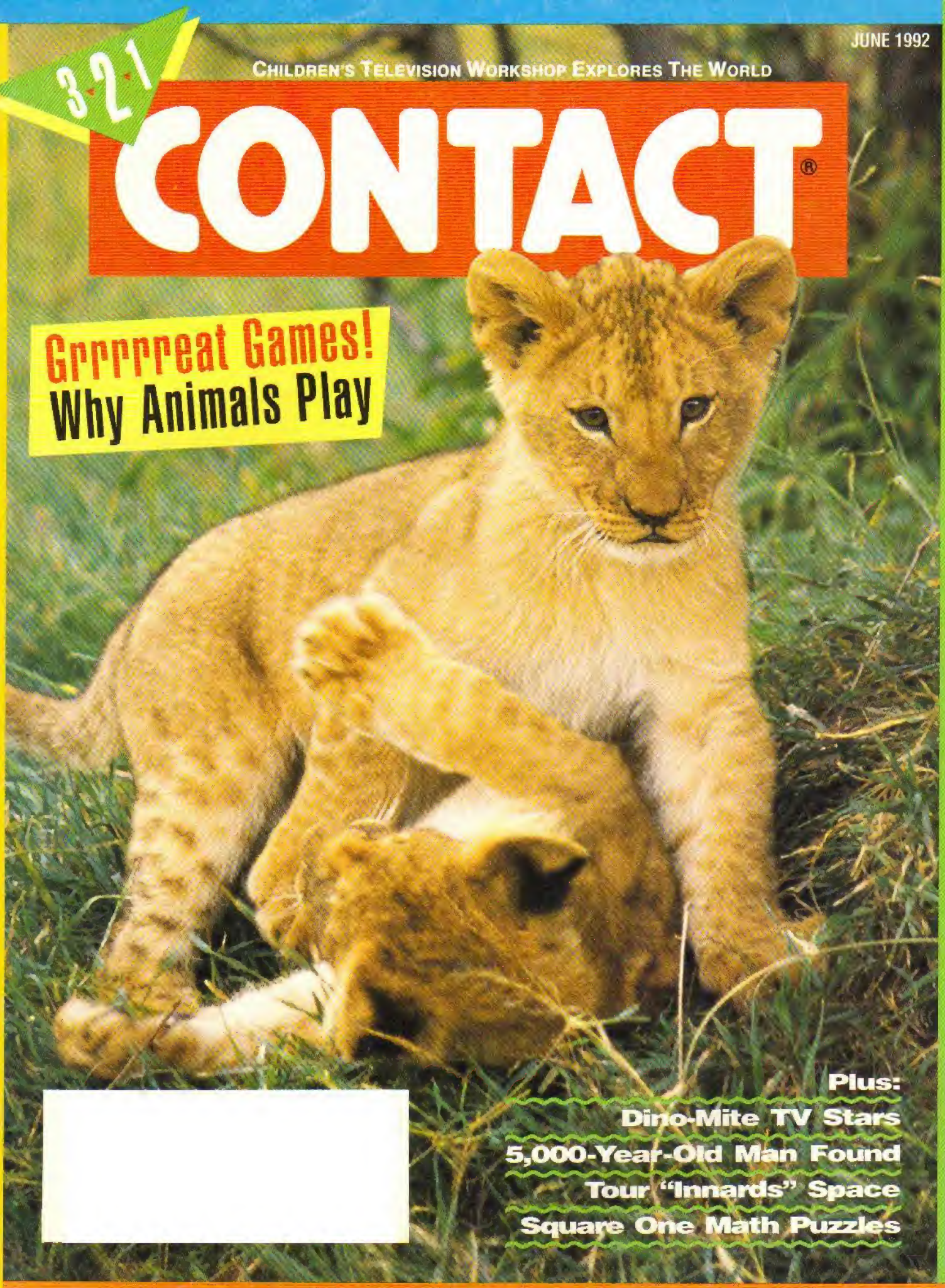

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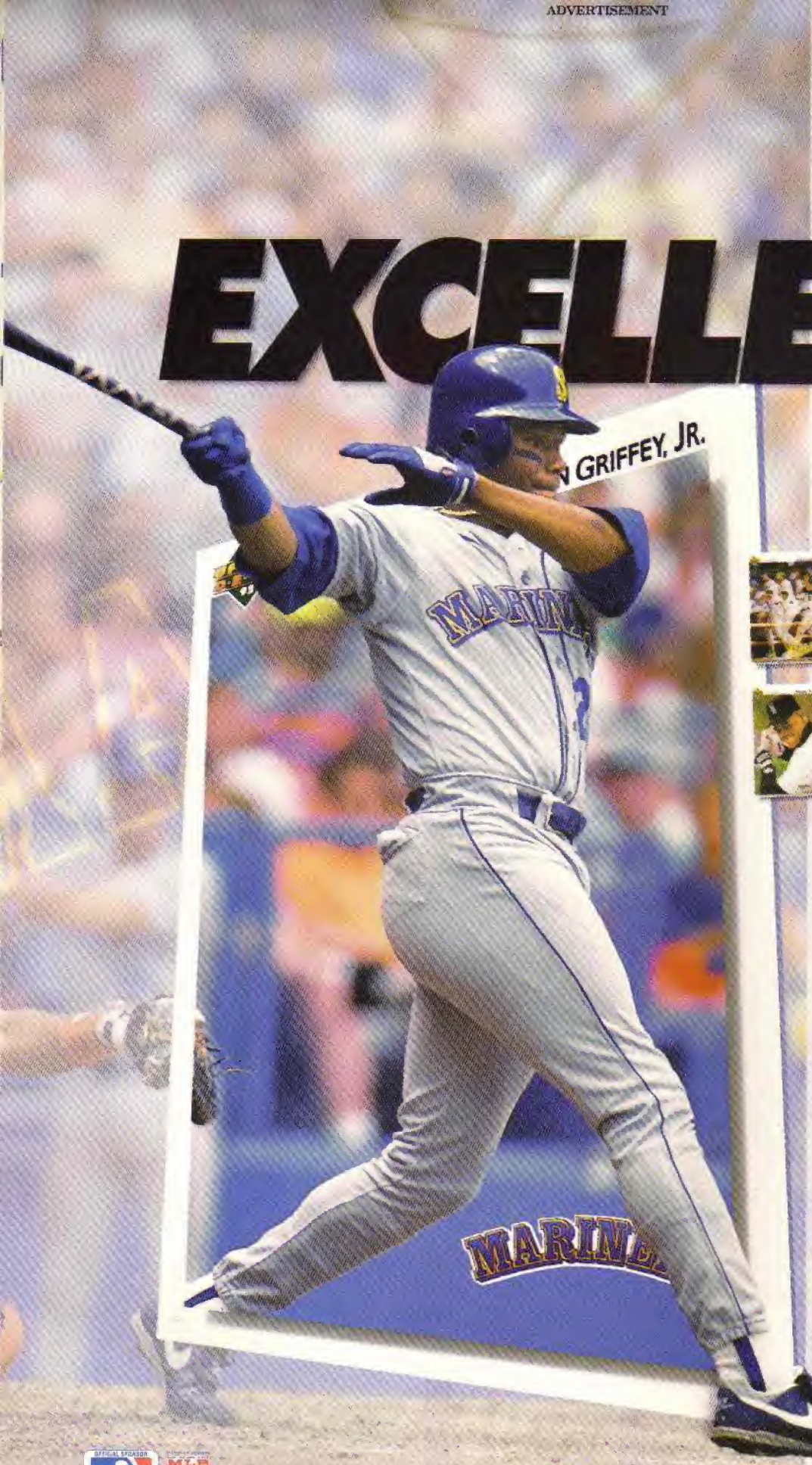

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DEPARTMENTS

ON OUR COVER

Lion cubs at play.
Photo © Will Troyer / Visuals Unlimited

TNT NEWS BLASTS

Blue Plate Special

You're at your favorite restaurant and the plate of the day is a...plate. Sounds hard to stomach? Maybe not. After all, you can eat this dish!

An Asian company has dished up a whole new set of plates and bowls that not only hold food, they *are* food! They're made of oatmeal. And, no, they aren't lumpy. They look like plastic-coated paper plates.

But what *is* different is that these dishes are easier on the environment. If people don't clean their plates, wildlife can finish them off.

The plates cost about 19 cents each—a small price to swallow for a cleaner environment. Since the dishes are bio-degradable, some fast-food restaurants plan to use them.

If the plates are a big "smash," the company plans to make boxes you can eat, as well as—you guessed it—eating utensils!

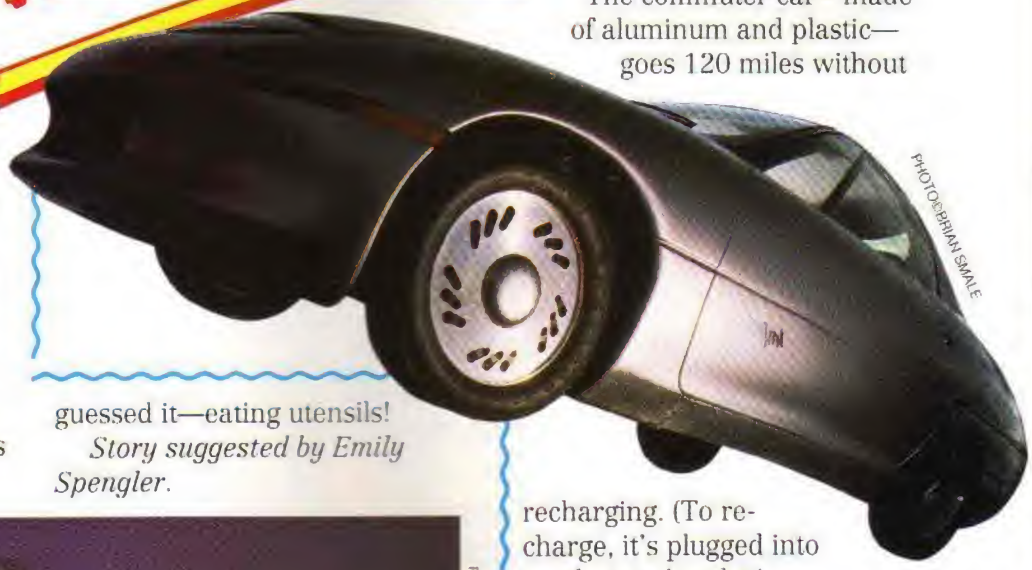
Story suggested by Emily Spengler.

PHOTOGRAPHY BY STAN FELLERMAN. PRODUCT COURTESY TAIWAN SU GU CO. LTD.

Out of Gas

Beep! Beep! Make way for a new electric car that'll be hitting the streets in two years. That's when General Motors will start selling the Impact, a battery-operated two-seater.

Even though the Impact runs on electricity, it's no revved-up golf cart. It zooms from zero to 60 mph in just eight seconds! The commuter car—made of aluminum and plastic—goes 120 miles without recharging. (To recharge, it's plugged into an electrical outlet.)



PHOTO©BRIAN SMALE

People are getting charged up about buying electric cars because of stricter clean air rules. The cars don't run on gas, so they don't pollute the air. Plus, an electric car makes about as much noise as an electric razor.

They're also cheaper to keep up than gas-guzzling cars: They don't need oil changes, spark plugs replaced or radiators refilled. Electric cars run on battery packs. Recharging the batteries (it takes from two to eight hours) costs only a little more than a gallon of gas. So who says electric cars don't make cents?

PHOTO COURTESY INNOVATIVE DESIGN & MARKETING

Space Janitor

NASA scientist Andrew Petro has come up with a sweeping solution to get rid of space junk: a spacecraft that acts like a broom!

More than 40,000 golfball-size pieces of space junk—as well as billions of smaller pieces—are whizzing around our planet at speeds up to 20,000 mph. Most space junk comes from leftover pieces of satellites and rockets. There are even tools lost by astronauts up there.

NASA wants to clean up this galactic junkyard because even a tiny piece can cause big damage. In 1983, a paint chip cracked the space shuttle *Challenger*'s windshield so badly it had to be replaced.

The space broom has a radar monitor that spots the junk and rotating blades that sweep it up. "It looks like a ceiling fan," says Petro. A *large* fan. The blades are a quarter-mile long!

NASA isn't planning to build the "solar blades" yet. They hope to stop dumping more space garbage, rather than just whisking it out of sight.

Primal Screen

Koko the gorilla first learned how to communicate through symbols. Then words. Then sentences. So what's next? A computer course, of course.

Koko can sign at least 600 words in American Sign Language (ASL) and understands more than 1,000 spoken words. But, even so, she couldn't talk back. Until now.

Thanks to a specially designed "talking" computer, Koko will now be able to "speak." Seventy buttons cover the screen of Koko's computer. Each button pictures a different ASL gesture. These gestures stand for words. When Koko presses a button, a recorded voice says the word. (Koko chose this voice from among four different ones. She liked it so much, she signed, "Gorilla myself good.")

Sounds easy enough. But the real test is keeping the hardware safe from all of Koko's hard wear. Just think what could happen when a 260-pound gorilla goes "ape"!

PHOTO©RONALD H. COHN/THE GORILLA FOUNDATION

So What's New?

You tell us and you'll get a nifty CONTACT T-shirt—if we print your story. Send us any science story from the news that you think our readers would like to know about. (Be sure to tell us your T-shirt size and where you heard the story.)

Send to:
TNT
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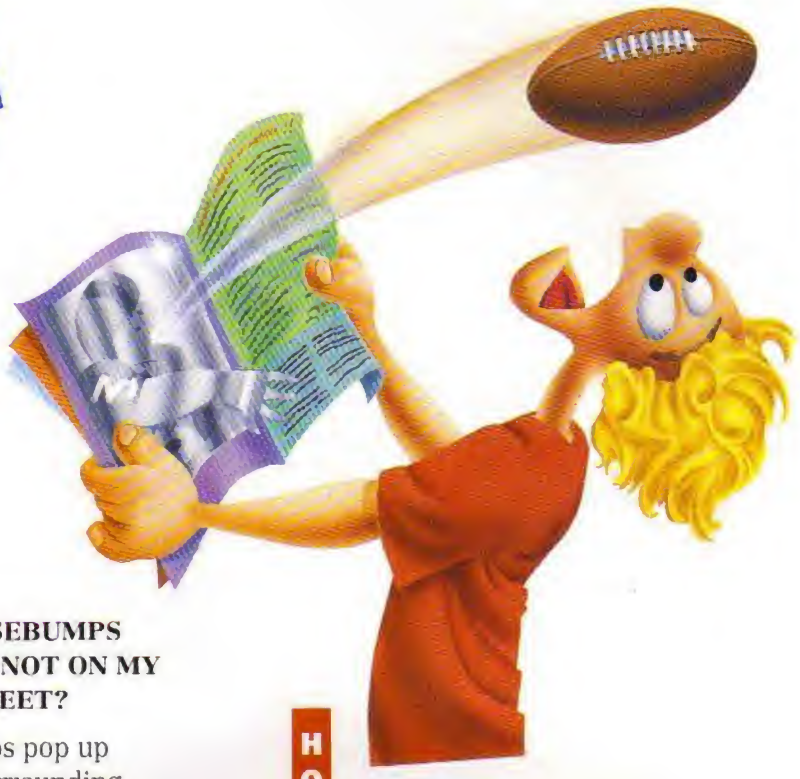
By Brianna Politzer



WHY DO I GET GOOSEBUMPS ON MY BODY, BUT NOT ON MY FACE, HANDS OR FEET?

Yikes! Goosebumps pop up when the muscles surrounding your hair follicles tighten up. (Follicles are the little holes that the hairs grow out of.) This causes the hairs to stand on end.

When you're afraid, cold or startled, the muscles tighten up and you get bumps.

You don't get goosebumps on your palms or the soles of your feet because you have no hair follicles in these areas. But you *do* have hair follicles on your face. So how come you don't have goosebumps there? Scientists think the muscles around them are so small, they can't cause goosebumps.

Although scientists know how goosebumps are formed, they still don't really know why you get them. Maybe they're just your hair follicles' way of standing at attention!

Question sent in by Mindi Morrow, Elkton, MD.

HOW DOES A HOLOGRAM WORK?

A hologram is a 3-D picture that looks like it takes up space just like a real object. In fact, the word "hologram" means "entire picture."

Holograms are made with light from a laser. The laser can fix patterns of reflected light onto film. These laser pictures look almost as real as the original object.

To make a hologram, a laser is beamed through a piece of film onto an object. The object reflects the light back onto the film. The light going through the film and the light coming back from the reflection leave an image on the film. This image is the hologram.

Holograms are popping up all over the place these days. Holograms have shown up in magazines, in jewelry and on stickers. And someday soon, there may even be holographic cameras that snap 3-D photos. Say cheese!

Question sent in by Ben Coleman, Watkinsville, GA.

ILLUSTRATIONS BY VALERIE MARSELLA

HOW DOES A PARAKEET TALK?

Talking birds—such as parakeets and parrots—can copy certain sounds that humans make. They seem to find it easiest to learn words that begin with the letters "p" or "b" (for example, "pretty bird").

Birds have membranes at the bottom of their throats that vibrate and produce sound—just as guitar strings vibrate and make sounds. (A membrane is a thin, flexible layer of skin.) Depending on the bird, the muscles that make these membranes vibrate are different sizes and shapes. That's why a crow sings a different tune from a robin.

If you have a pet parakeet and plan to teach it to talk, watch out! Before you know it, the bird will be talking back. So make sure you don't tell any secrets near Polly's cage!

Question sent in by Natalie Petite, Milwaukee, WI.

WHY IS IT HOT IN SUMMER AND COLD IN WINTER?

At the North and South Poles, it's always cold. And near the equator, it stays hot all year round. But there are four seasons in most other parts of the world. So what gives?

The change of seasons is caused by the slant of the Earth's axis. (The axis is an imaginary line through the center of an object, around which the object turns.) The Earth's axis points to the North Star at a 23½ degree slant.

For six months, the northern part of the Earth gets less sunlight because the axis is tilted away from the sun. It's cold because the sun's rays hit on a slant and produce less heat.

And in the summer—when the axis is tilted toward the sun—the direct rays of the sun make it nice and hot.

The sun's rays always strike the North and South Poles at a slant—so it's always cold. And at the equator, there are no seasons because the sun's rays always make a direct hit.

Question sent in by Miki Fukunaga, Westlake Village, CA.

Do you have a question that no one seems able to answer? Why not ask us? Write to: Any Questions? 3-2-1 Contact, P.O. Box 40, Vernon, NJ 07462

MAIL

THE MISSING LINK

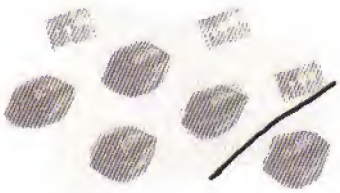
Dear CONTACT,

In your October '91 issue, I can't read the answers on the Did It page. Please let me know what they are.

Erin M. Gibson
Zanesville, OH

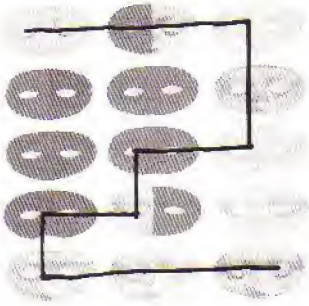
Sorry about that, Erin. You weren't the only reader who couldn't make out some of the answers. Below is a reprint of the October '91 Did It page.

TOOTH OR CONSEQUENCES



BAH

MASK A SILLY QUESTION



WHO NOSE?

DRILLING HOLES IN OUR FACTOIDS!

Dear CONTACT,

In your October '91 Factoids, you say that the toothbrush was invented in China. I have a book that says it was invented by a prisoner in England. Which is right?

Jimmy Sergi
Gilroy, CA

We brushed up on the subject to answer this. There are two theories about who invented the toothbrush. Your book says that William Addis invented the toothbrush in prison in 1770. However, our book, Extraordinary Origins of Everyday Things, *says the toothbrush was first made about 1498 in China. Who's right? That's for historians to bristle over.*

WHERE'S THE FIRE?

Dear CONTACT,

I am confused! Recently, the local paper reported that all of the oil well fires in Kuwait were put out. However, in your article "Feeling the Heat" (December '91), you said that firefighters would need several more months to put out the remaining 400 fires. Are there fires still burning?

Cindy Carpenter
Puyallup, WA

You picked a hot topic, Cindy. When we went to press, environmental experts felt it would take a year to put out the fires. But the good news for the environment is that the oil fires were smothered more quickly and more easily than predicted. So, at about the time your issue was mailed, the fires were all put out.

WE WANT MAIL!

Dear Readers:

We love hearing from you. Your questions and ideas help us make CONTACT a better magazine. So why not drop us a line? We can't answer every letter, but we do read them all. Send your mail to:

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WILD GAM

Do Animals Just Want to Have Fun?

By Christina Wilsdon

PHOTO/ALAN CAREY/PHOTO RESEARCHERS

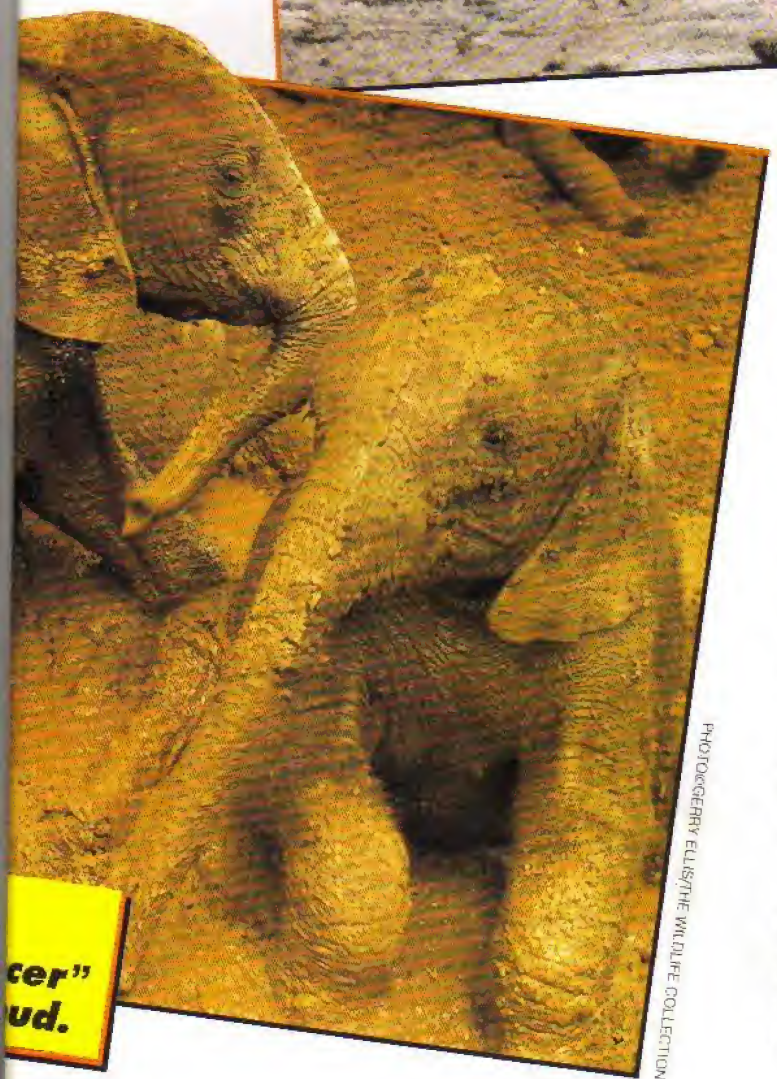
Mountain goats kick up their heels and leap for joy.

A Herd of African elephants play "so with a big ball of

ES

Lion cubs in Africa chase each other's tails.

PHOTO©CHRIS JOHNS/ALLSTOCK



PHOTO©GERRY ELLIS/THE WILDLIFE COLLECTION

cer"
ud.

It's playtime in the animal kingdom!

Why do animals play? After all, they can get hurt or even killed while playing: Unlucky mountain-goat kids fall off cliffs, and hawks snatch up prairie dogs that aren't paying attention.

John Byers, a zoologist at the University of Idaho, says there is a reason why animals take risks to play. After years of watching fawns leap and twist and ibex-goat kids spring off cliffs into midair, Byers believes that play helps prepare young animals for life. While playing, they learn skills that could one day save them from a hungry predator.

For example, an ibex-goat kid's extra-high skip might one day save it from a mountain lion.

And play helps "wanna-be" predators practice for real life, too. They learn how to hunt for food through play, says Stacy Dias. She is a wildlife expert at Wolf Haven in Tenino, WA.

"Wolf cubs use hunting behavior a lot. While playing, they'll pounce on grasshoppers, crickets and snakes," Dias told CONTACT. "One set of cubs stalked baby ducks until the mother scared them away!"

Wolf cubs also wrestle with each other, using the same body language and actions that they'll use as adults in the pack. For example, one young wolf might place its front feet on the shoulders of another wolf. It might even snap at the other wolf's neck. It's one way a wolf says, "I'm top dog around here." ☞

With all this running, chasing and fighting going on, it's important for animals to let each other know that it's just a game. That way, no one gets hurt or thinks that a real predator is nearby. How do they communicate this? By using actions called "play markers," says Byers.

"Young hoofed animals (like mountain goats) rear up high, shake their heads, tilt their bodies, kick with their front legs and buck with their hind legs out to the side," Byers told CONTACT. "Other animals don't seem to have trouble telling a youngster who's playing from one who's running from a predator."

"Many animals make what's called a 'relaxed, open-mouth play face,'" says Marc Bekoff, a professor at the University of Colorado. This open-mouth play face is the opposite of a toothy snarl. "Play-fights almost never turn into real fights," Bekoff adds.

Some play signals are familiar to many pet owners. A dog says "let's play" by opening its mouth in a "grin." It crouches down on stiff front legs with its tail stuck in the air. (This is called a "play bow.") A cat may poke another cat (or a person!) with its paw, tap it on the face or stalk it.

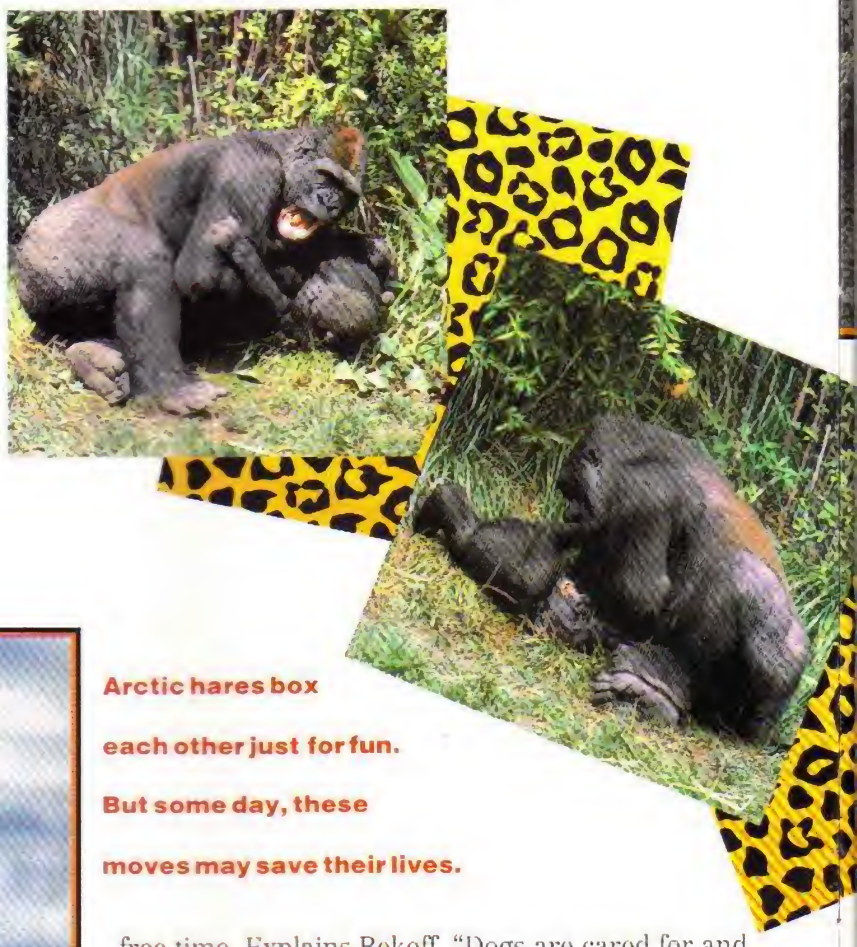
Wild animals use play signals, too. A weasel arches its back and does a stiff-legged hopping dance around a playmate. Wolves play-bow. Chimpanzees open their mouths and hide their teeth with their lips.

Young animals play with each other—and sometimes with their parents. A mother goat may leap around to inspire her lazy kid to get going if she sees other kids are playing. Lionesses twitch their tails for cubs to chase. A male giraffe may gently play-fight with Junior, letting the little one bonk him with his neck.

Time to Play!

But it's not just the young that want to have fun. Grown-up animals sometimes play by themselves or with other adults. Bekoff noticed this when he studied coyotes in Wyoming.

"The adults spent about one to two percent of their time playing," he told CONTACT. That isn't much, but adult wild animals don't have much free time. Explains Bekoff, "Dogs are cared for and have all the time in the world to play. But wild animals have to find food and be alert."



Arctic hares box each other just for fun. But some day, these moves may save their lives.

Play also uses up a lot of energy, Byers adds. And many times an animal can't afford to spend the energy it would cost to play. Because of this, not all animals play. Reptiles don't. Neither do fish, amphibians or insects. They're cold-blooded, so they don't have the energy to spare. It would take them hours to replace any energy they used.

Plus, most cold-blooded animals and insects

PHOTO: KARI WOLHE

These peccaries seem like fun-loving pigs!

PHOTO © TOM MCHUGH/PHOTO RESEARCHERS

are on their own right from the start—unlike young mammals, who are fed, groomed and protected by their parents.

Pig Heaven

Studying animal play isn't all work and no play! Researchers often see amazing sights. Byers remembers watching collared peccaries play in Arizona. Peccaries are wild pigs that live in small groups and play in round patches of dirt.

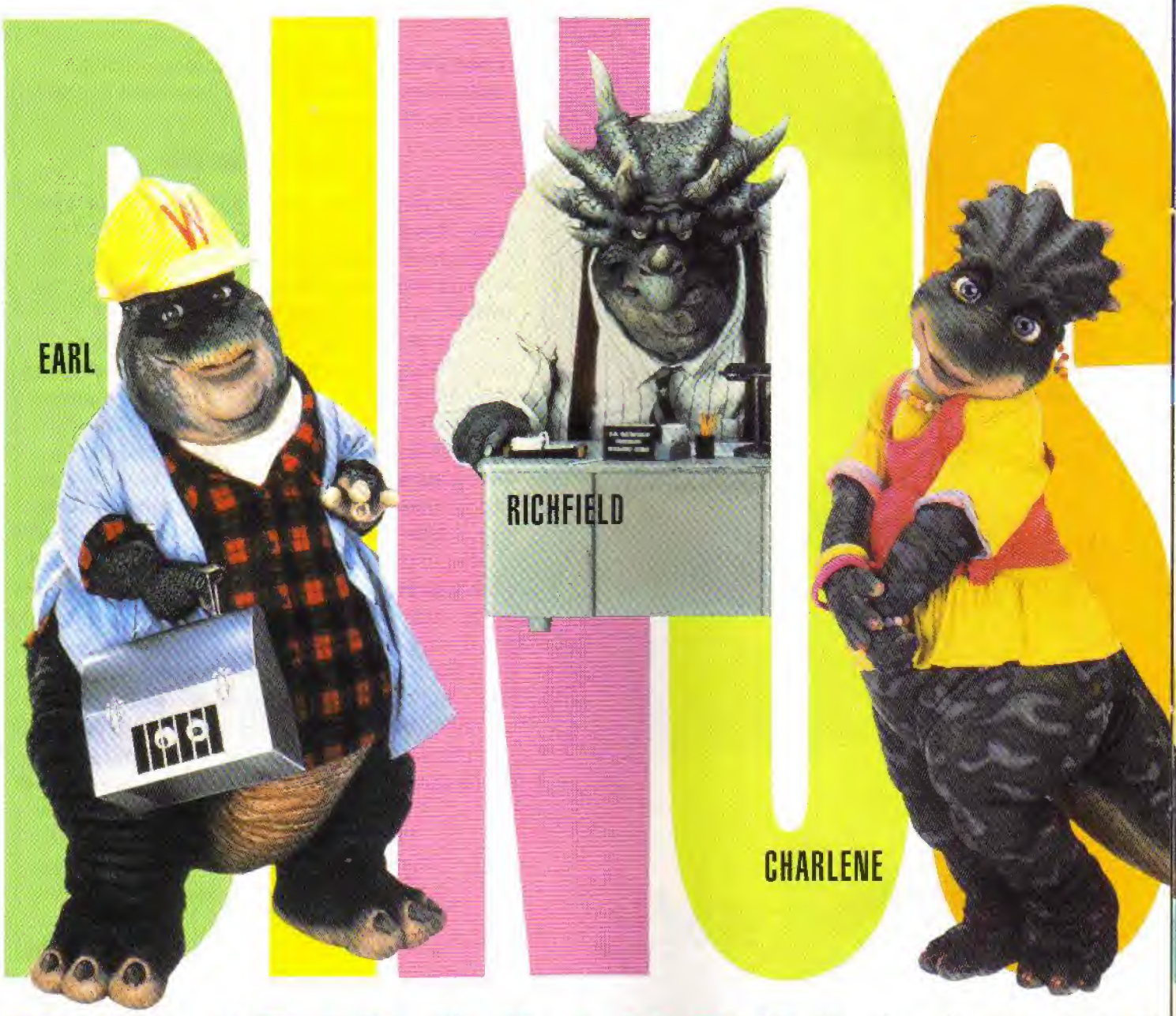
"Sometimes, the whole herd plays," he reports. "They dash around as if they're playing tag. Sometimes a peccary will lie on its side. Another runs up. Both open their mouths wide. The one on the top leaps onto the bottom one. They clamp their jaws together, and the top one sails over the bottom one and crashes to the ground. No one knows why they do this."

Could these peccaries—and other animals—simply be having fun? Some scientists say yes, some say no. Marc Bekoff feels very strongly that animals *are* having fun. They're not just playing to learn.

"There are many ideas about why animals play," he says. "Play is a necessary activity. It's part of normal development. But it's also possible that animals play for fun, even if we can't prove it." Besides, why else would elephants play soccer? ◆

A gorilla tickles his baby's fancy. You can tell dad is just fooling around by his "open-mouth play face."

GORILLA PHOTOS © TOM MCHUGH/PHOTO RESEARCHERS



PHOTOS©WALT DISNEY TELEVISION

TV'S "DINOSAURS" ARE PR

Side by side, the experts are lined up at the control panels, making final adjustments. Dozens of technicians scurry about, checking wires, testing motors and connecting mechanical joints. Others are staring into video monitors, fastening their headsets and waiting anxiously for instructions. Everyone is ready for things to begin.

Is NASA about to launch a new spacecraft? Are operators ready to start up a nuclear reactor?

Uh-uh. Suddenly, an enormous dinosaur, a Megalosaurus, wearing a plaid shirt, trudges across the stage. He yawns and scratches his belly. Then he picks up his lunchbox and walks away.

It's just another day on the set of *Dinosaurs*.

Dinosaurs is a weekly TV comedy series starring Earl, Fran, Charlene and Robbie—a family of giant meat-eating creatures.

A 20,000-Pound Cosby Show

The show takes place in prehistoric times. But the setting is a lot like *The Cosby Show*. Instead of stalking prey or living in swamps, the stars of the show are construction workers. They live in a cave-like house with velvet paintings, refrigerators and TV sets. And they act just like modern humans, too.

Dinosaurs is goofy and fun. But what's really special about the show is how it's put together. "This is one of the greatest puppeteering projects

EHISTORIC SUPERSTARS

By Russell Ginns

ever," says Steve Whitmire. He operates several of the characters, including the teenage dinosaur, Robbie. "Sometimes, I'm amazed when we get things done at the end of the week."

Dinosaurs uses a system of puppetry called "animatronics." The creatures' faces are operated by computers and remote control. Many of the same systems have been used in recent movies, such as *Teenage Mutant Ninja Turtles*. But this is the largest use of animatronics ever for a TV show.

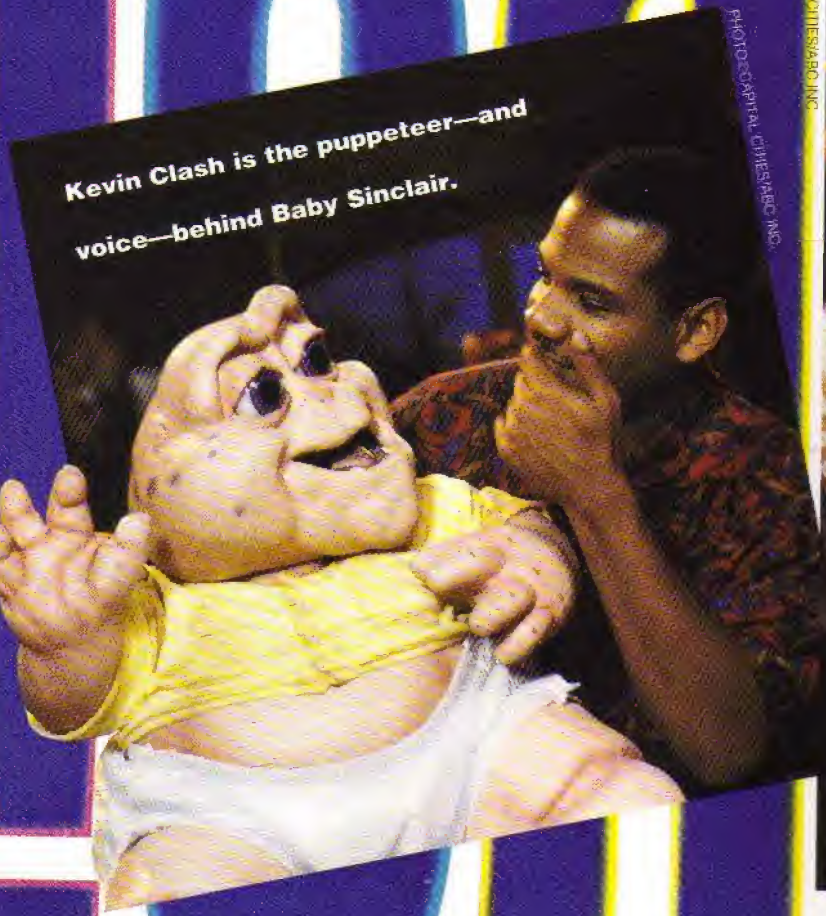
All Hands on Deck

The number of programmers and puppeteers working on the show is amazing. Along one side of the stage is an entire row of computerized control panels. Teams of puppeteers stand behind each one, holding joysticks and hinged metal mittens called "Waldos." Moving these devices makes the giant faces talk, smile and frown.

One of the show's characters, Monica, is a giant, long-necked Apatosaurus. Every once in a while, she sticks her head into Earl's window to talk.

It takes a team of five puppeteers to operate Monica—and she's just a neck and a head! One person works the mouth and face and speaks her lines into a microphone. Another moves her eyeballs. Three more people operate her neck.

One of the strangest sights on the *Dinosaurs* ☞



Kevin Clash is the puppeteer—and voice—behind Baby Sinclair.

PHOTO: CAPITAL CITIES/ABC INC.

Dozens of technicians use remote controls to bring the dinosaurs to life.

PHOTO: CAPITAL CITIES/ABC INC.

BUT BEHIND THE SCENES TH

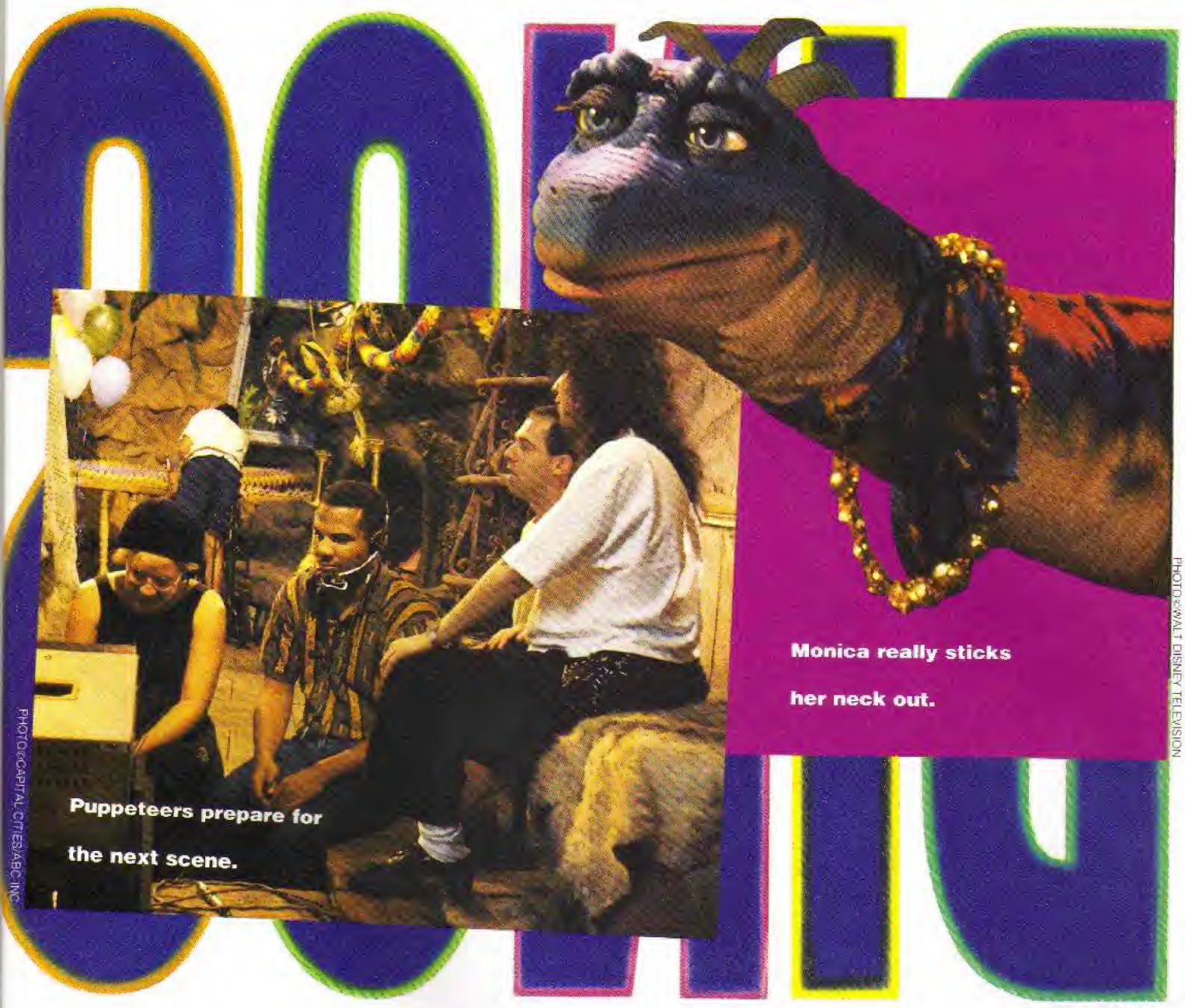
set are the extra heads, detached from their owners' bodies. The main characters' faces are made of foam rubber over a fiberglass frame. Each one has 20 to 30 motors to move the eyebrows, nostrils, cheeks and foreheads. The heads are complicated. They often need to be adjusted and repaired. So there is at least one extra head for each of the show's main characters.

Sneak Preview

Not all of the puppeteering is so high-tech. Steve Whitmire is the voice of Robbie and works the mouth by remote control. At the same time, his partner, Leif Tilden, is inside Robbie's body, making the arms and legs move.

Moving around in a costume to create a character is called "suit performing." This is one of the more difficult kinds of puppeteering. And in this case, it's extra difficult because the performer doesn't get much of a chance to see his or her surroundings. There are two small holes in the dinosaur's neck. But it's difficult to see through them. The only other light comes in when the dinosaur's mouth flaps open and shut.

"I usually leave Robbie's mouth open a lot, so Leif can scope out the area while we're rehearsing," Steve Whitmire told CONTACT. "But when we're filming, he has to rely on his memory and



Puppeteers prepare for the next scene.

PHOTO©CAPITAL CITIES/ABC INC.

Monica really sticks her neck out.

PHOTO©WALT DISNEY TELEVISION

EY'RE HIGH-TECH PUPPETS

move around in the dark."

Whenever Richfield—Earl's dinosaur boss—appears in a scene, two puppeteers have to work inside him at the same time. One person sits in front, with an arm inside each of Richfield's arms. The other person sits directly behind him, with one hand reaching up into the dinosaur's head. "It's like being inside a big, dark, rubbery tent," says Whitmire.

State of the Art

Animatronics and special effects allow performers to create new and exciting creatures. But plain old hand-puppetry is still the best way to move many of the creatures—like the fuzzy animals the dinosaurs dine on. Operating these and other characters are hand-puppeteers hidden below tables or just out of the camera's line of sight.

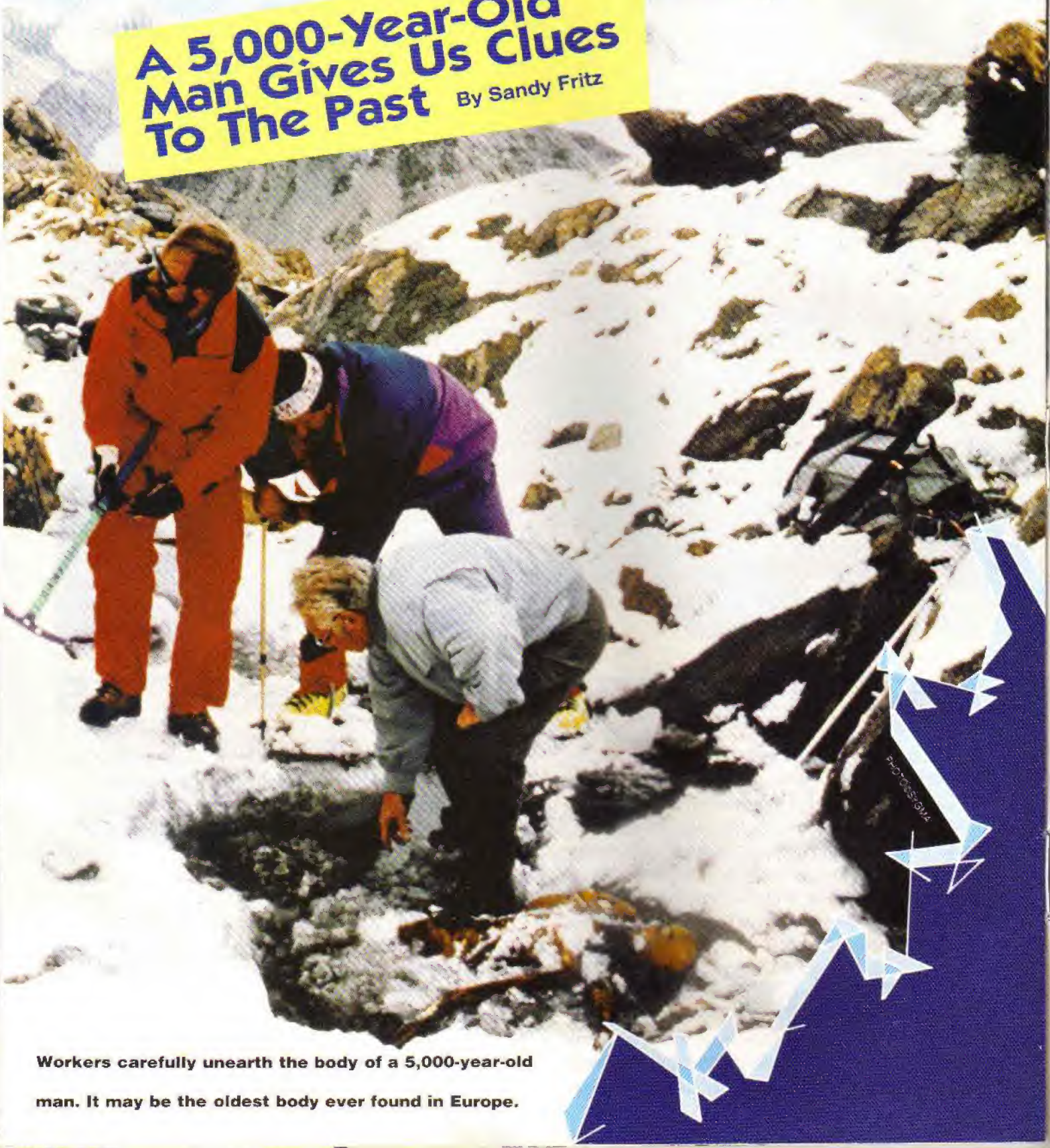
Is all this hard work, machinery and confusion worth it? The crew of *Dinosaurs* thinks so. "We're creating an illusion," one puppeteer told CONTACT. "If we can convince people that they're watching personalities—not a bunch of motors and foam rubber—then we've done our jobs right."

Steve Whitmire agrees. "This kind of puppetry is state of the art," he says. "It's a whole new way of bringing things to life"

FROZEN

A 5,000-Year-Old Man Gives Us Clues To The Past

By Sandy Fritz



Workers carefully unearth the body of a 5,000-year-old man. It may be the oldest body ever found in Europe.

ON TIME

It's bitterly cold. The wind whips across the snowy mountains of Austria. A 25-year-old mountain climber stops to rest a moment on an icy slope. To warm up, he stomps his feet and blows on his numb fingers. After eating some berries, he slings his backpack over his shoulder and starts climbing again.

He picks his way over the rocks and ice—not knowing that he's almost at the end of his journey. At 10,500 feet up the mountainside, something happens.

The climber dies hunched over on his knees. Harsh winds quickly dry him out. Then his mummified body is covered with a blanket of snow. Slowly, the snow turns into ice, and he is forgotten.

More than 5,000 years pass. Then, last September, shocked hikers spotted the blackened body of the climber. (The cold gave his skin "freezer burn.") He was lying face down on a rocky shelf. The police were called in. They scrambled up to the two-mile-high location and picked up the frozen body.

Message from a Lost World

When medical examiners closely inspected his skin, they realized the man was from the distant past. They decided this was a job for Dr. Konrad Spindler. He is an expert on people who lived thousands of years ago.

"It took me about one second to realize how old he was," Dr. Spindler told CONTACT. "There was an ax found alongside the body that convinced me this was a man from the early metal age."

How did they know that the man really died around 3,000 B.C.? To find out, scientists carbon-dated his body. All living things contain the chemical carbon-14. When a plant or animal dies, it no longer absorbs carbon. And the carbon-14 already there slowly breaks down. So scientists could tell how old the body is by using a special instrument to measure how much carbon-14 is left. (The older it is, the less carbon it will have.)

The body—well preserved by the ice—may be the oldest ever found in Europe. "It may be one of the most important finds of the century!" Dr. Spindler exclaims. "We know very little about prehistoric people. All we have are some bones, tools and a few remains of houses." But the body will now allow scientists to get a better idea of what life was like 5,000 years ago.

Otze the Iceman

Scientists nicknamed the iceman "Otze" (say: *URT-sey*), for the Otztaler region where he was found. "Otze had dark, almost black hair," says Dr. Spindler, adding that his long hair fell out when he was mummified by the cold, dry wind. (Researchers discovered hair lying around the body.) Another big surprise: Otze has blue tatoos—made from vegetable inks—on his back, his knees and his ankles! So far, no one knows if the line and crosses tatooed on his body mean anything. Scientists also found a stone bead necklace. They think he may have worn it as a "good luck" charm. ☞

PHOTOSYNTHESIS

These wood and metal tools were found with Otze. The largest object is an ax with a metal blade and a wooden handle.

Otze's clothes, little of which remain, are interesting, too. "We know he wore a fur-lined leather coat," says Dr. Spindler. He also wore a cape of tightly woven reeds to block wind and snow. Otze's leather trousers and shoes were stuffed with hay to help keep him warm. Researchers found some grains, dried fruit, animal bones and other belongings near the body. "He carried a flint knife with a wooden handle, arrows, a flint for starting fires, a small leather pouch and a birch-bark backpack."

Scientists were astonished when they discovered his bow. Otze himself only stood about five feet, three inches tall. But his bow was almost five feet, 10 inches long! Like the bow, the flint-tipped arrows were extremely large, almost three feet long.

"The bow, as well as the arrows, were not yet ready for use," says Dr. Spindler. Since the weapons weren't ready to fire, scientists think Otze must not have felt he was in danger.

"Otze was obviously an experienced mountain climber," observes Dr. Spindler. "His clothes and belongings showed that he was well prepared for living days, even weeks, on the mountains. Death must have taken him by surprise."

Testing the Ice

Today, Otze is kept in a special room at the University of Innsbruck. To keep him preserved, the room temperature remains around 21 degrees F. This summer, lots of tests will be done on Otze. "We'll have about 100 scientists working on different projects," says Dr. Spindler. "Specialists in medicine, archeology and biology will all help with the tests."

What will they be looking for? Scientists will study his tools and clothing to find out how they were made. The body itself will be tested to see if Otze suffered from any viruses or diseases, such as arthritis. Scientists will even figure out what Otze ate by looking inside his stomach and at his teeth! (His teeth are worn down—typical of a time when people ate lots of meat and coarse grains.)

Already, a team of experts is using high-tech X-rays to peer inside the body. "We want to test as much as possible without cutting the body itself," says Dr. Spindler. These 3-D images may also help scientists reconstruct the way he actually looked.

Dr. Spindler will peek into Otze's DNA to discover any differences between him and modern humans. (DNA is found in cells and determines the body's characteristics.) He also plans to compare Otze's samples to DNA samples of people now living in the Austrian mountains to see if they are related!

"We will also try to find out what the cause of death was," says Dr. Spindler. "I think he lost his way and died of cold in a blizzard."

Why was Otze in the mountains in the first place? Was he there to mine copper, to hunt or to trade goods with a settlement on the other side? No one knows. And some mysteries about his life—and his death—may never be solved. ◆

is is an artist's ea of what a an from the olithic Age oked like.

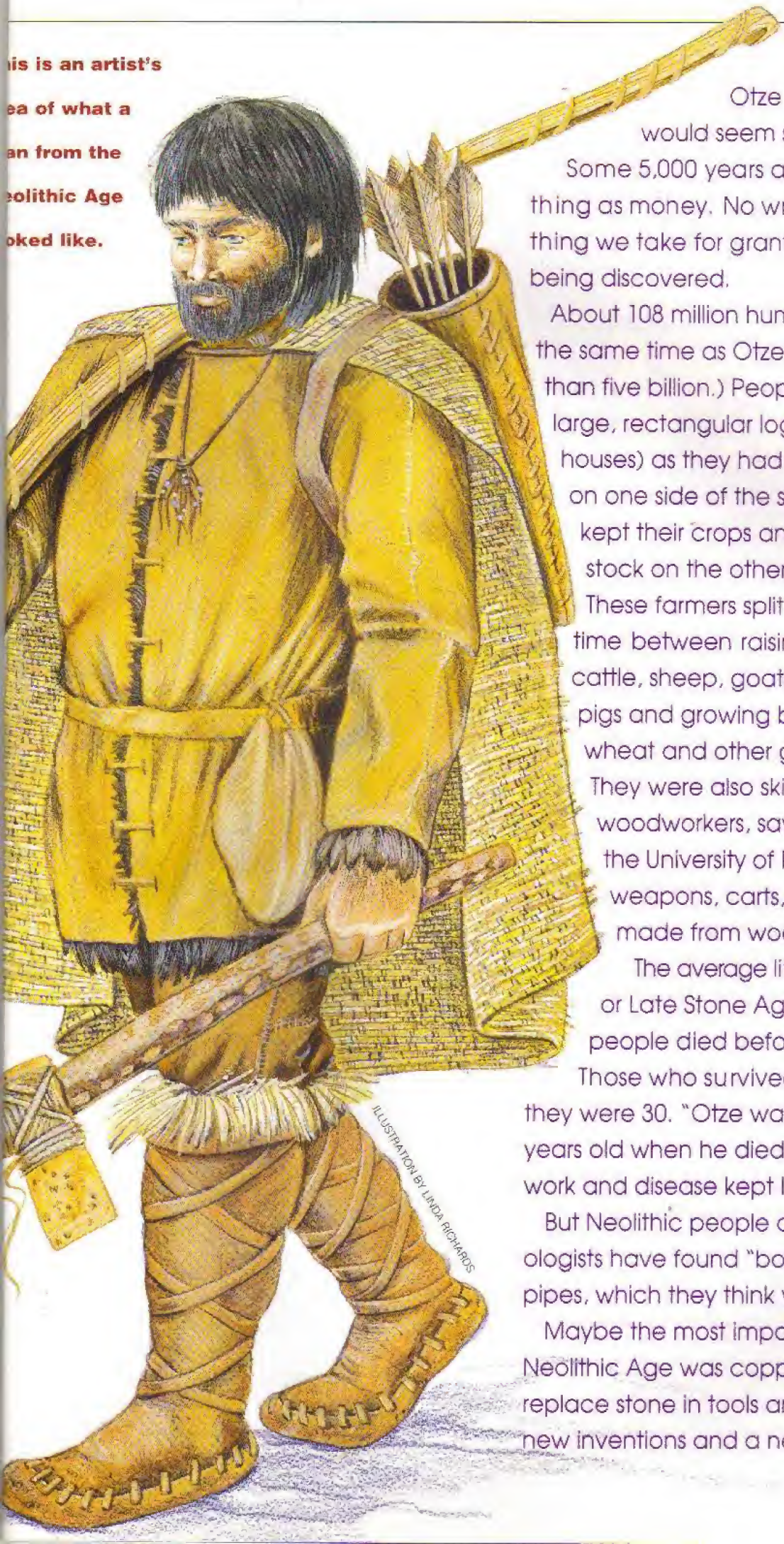


ILLUSTRATION BY LINDA RICHARDS

Otze's World

Otze lived in a world that would seem strange to most of us. Some 5,000 years ago there was no such thing as money. No writing. No clocks. Something we take for granted—metal—was just being discovered.

About 108 million humans lived on Earth at the same time as Otze. (Today, there are more than five billion.) People in Europe lived in large, rectangular log cabins (called long houses) as they had for centuries. They lived on one side of the single-story building and kept their crops and livestock on the other!

These farmers split their time between raising cattle, sheep, goats and pigs and growing barley, wheat and other grains. They were also skilled woodworkers, says Dr. Bernard Wiles of the University of Pennsylvania. Their tools, weapons, carts, plows and houses were made from wood.

The average life span in the "Neolithic," or Late Stone Age, was short. Half of the people died before their fifth birthday. Those who survived usually died before they were 30. "Otze was probably close to 25 years old when he died," says Dr. Spindler. Hard work and disease kept lives short.

But Neolithic people didn't just work. Archeologists have found "bottomless bowls" and pipes, which they think were drums and flutes.

Maybe the most important thing about the Neolithic Age was copper. It was beginning to replace stone in tools and weapons. This led to new inventions and a new way of life.

The Inside Story

A FANTASTIC VOYAGE THROUGH THE HUMAN BODY

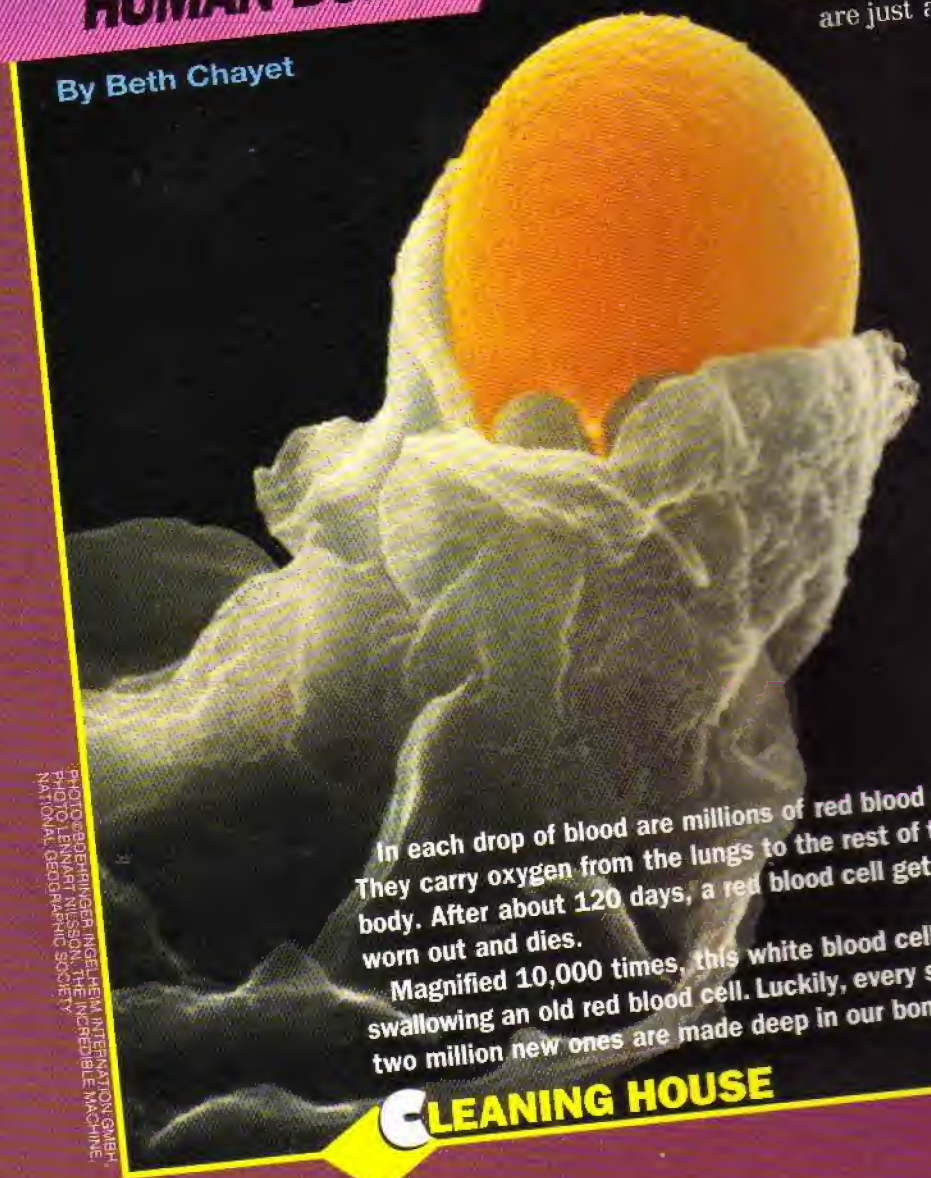
By Beth Chayet

Photographer Lennart Nilsson really knows how to get under your skin. His fantastic photos give close-up looks at the inside of the human body.

To photograph organs, tissues and cells, Nilsson uses a camera with lots of special lenses. To get an even closer look, he connects his camera to a scanning electron microscope. The microscope magnifies objects up to 100,000 times! The image appears on a TV screen, which Nilsson then photographs. The black and white photos are later colored by hand.

Nilsson works with scientists and doctors to get the inside scoop. He photographs body parts that have been preserved for research. Many of the cells are kept in laboratory dishes until he's ready to snap a photo.

Nilsson's photos give people a better understanding of how our body works. Here are just a few of his inside views.



In each drop of blood are millions of red blood cells. They carry oxygen from the lungs to the rest of the body. After about 120 days, a red blood cell gets worn out and dies.

Magnified 10,000 times, this white blood cell is swallowing an old red blood cell. Luckily, every second, two million new ones are made deep in our bones.

PHOTO©BOEHRINGER INGELHEIM INTERNATION GMBH; PHOTO LENNART NILSSON, THE INCREDIBLE MACHINE, NATIONAL GEOGRAPHIC SOCIETY

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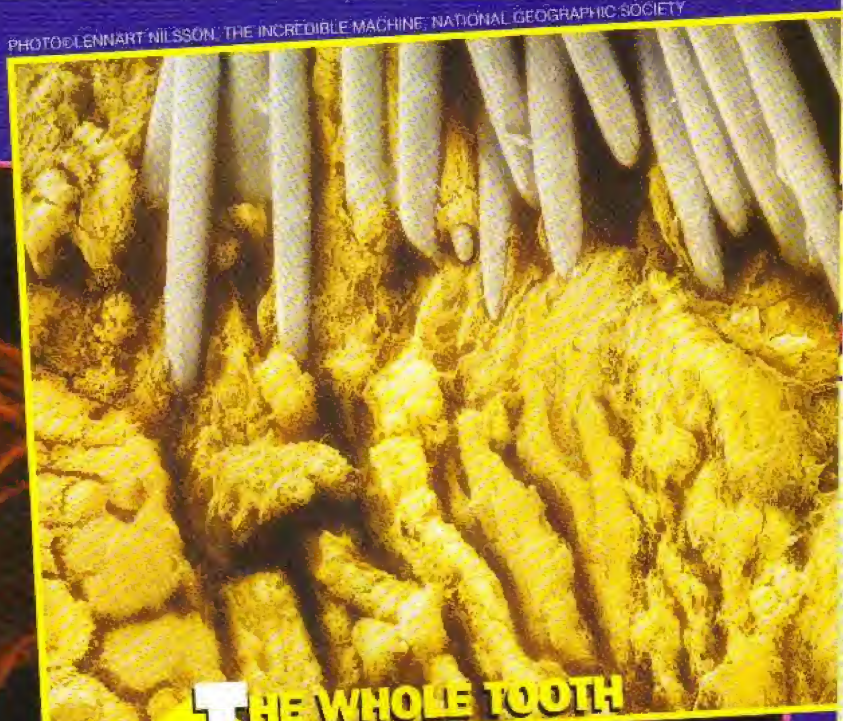
CLEANING HOUSE

DOWN UNDER

This underground cave is really the lining of the large intestine, magnified 400 times. About five feet long and two-and-a-half inches wide, it receives undigested food from the small intestine. The large intestine absorbs water from these pieces of food.

Food takes about 24 hours to pass through the body. It remains longest in the large intestine, about 14 hours.

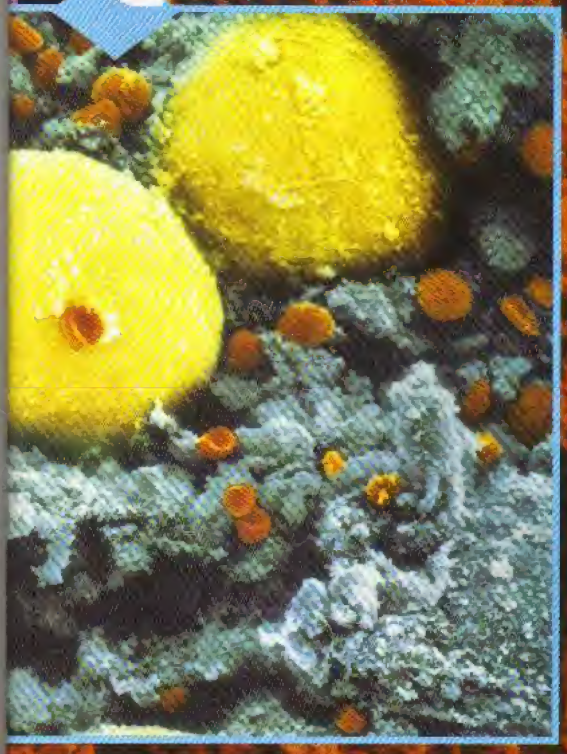


THE WHOLE TOOTH

If you don't brush at night, here's what your toothbrush (the bristly stuff at top) has to remove in the morning: plaque. That's invisible, sticky film that forms on your teeth. In 24 hours, bacteria living in plaque begin to eat away the surface of teeth and cause cavities.

This tooth (magnified 75 times) was just pulled from a patient's mouth.

GO WITH THE FLOW



No yolk! These yellow globs, magnified 1,000 times, are fat droplets clinging to the wall of a coronary artery.

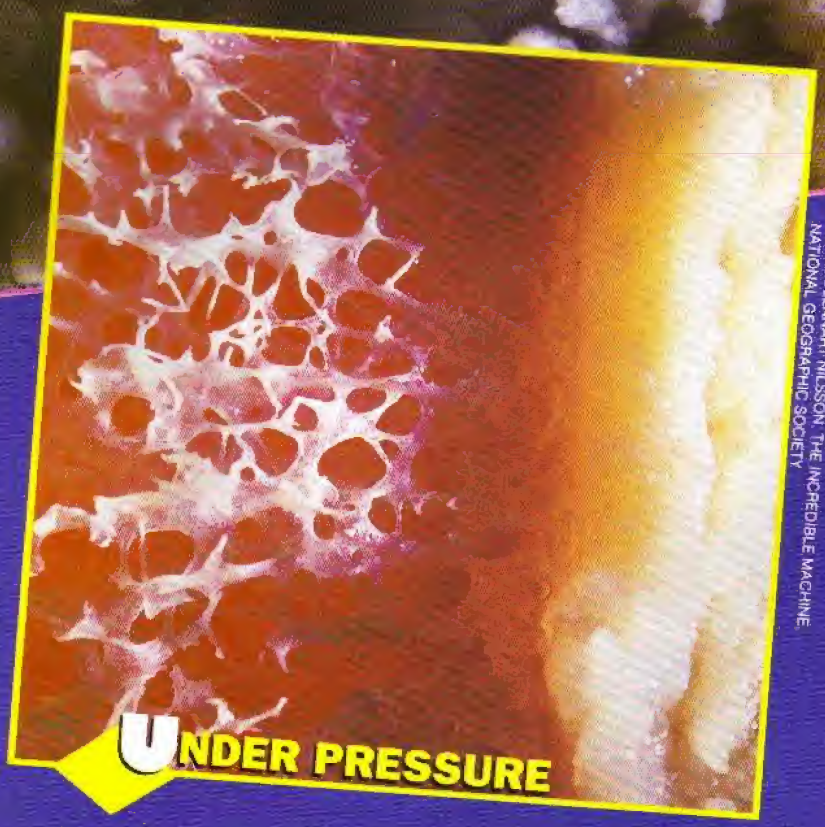
Arteries are blood vessels that carry blood from the heart to other parts of the body. Eating too many fatty foods can cause fat deposits to collect in arteries. This could block the arteries, causing heart problems.

SAY AHH!

Without them, food would have no taste. They are papillae (say: *pap-EEL-yeah*), little bumps found all over the top of your tongue. They tell your brain when something is sweet, sour, salty or bitter.

More than 10,000 taste buds are in the skin around the base of papillae (here magnified eight times). Each taste bud has about 50 taste cells. They live for about a week. But new cells always replace them.

PHOTO©LENNART NILSSON, THE INCREDIBLE MACHINE, NATIONAL GEOGRAPHIC SOCIETY



UNDER PRESSURE

Sitting between the bones of the spine is a rubbery substance called cartilage. It acts as a shock absorber. It's also on the end of your nose and on the outer part of your ears. The sponge-like bone (left) and cartilage have been magnified five times.

Cartilage keeps these bones from grinding together. Otherwise, the bones would wear away!

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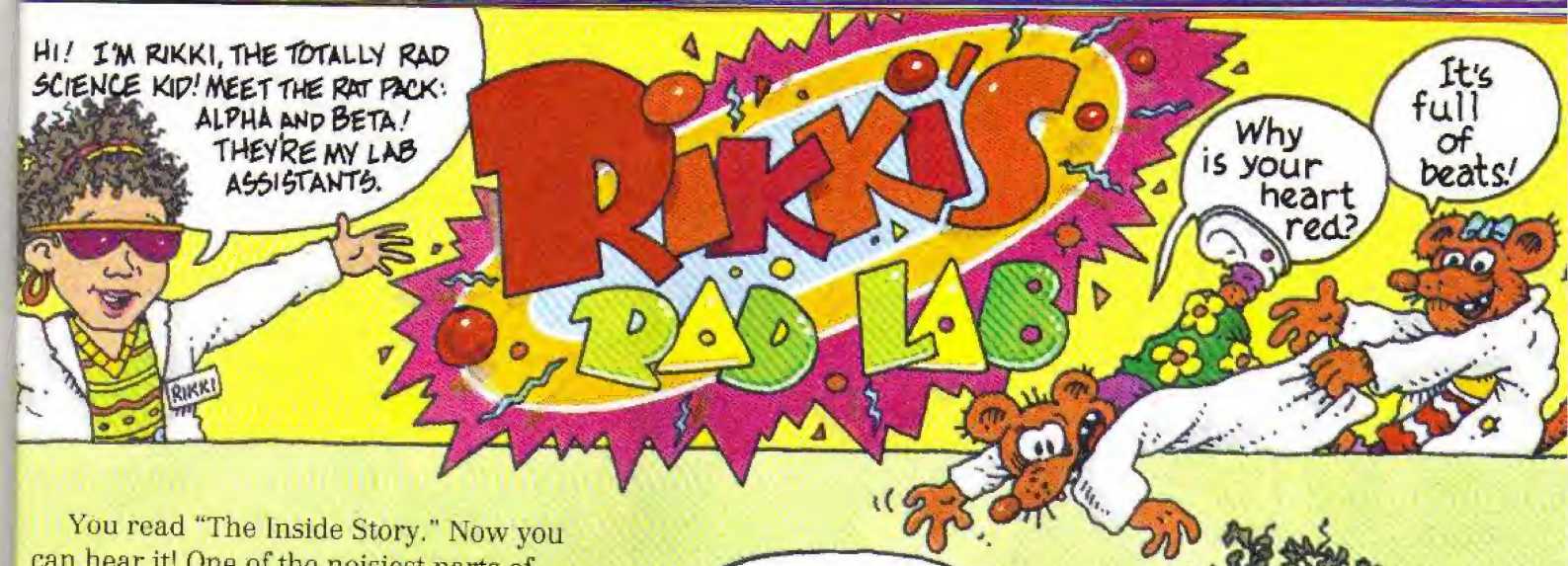


You read "The Inside Story." Now you can hear it! One of the noisiest parts of your body is the heart. Beta's heart sounds like a motorboat. It beats almost 1,000 times a minute! Make this stethoscope to find out how fast *your* heart beats.

ILLUSTRATION BY FRED SCHRIER

What You Need

- Two plastic funnels
- 24-inch-long piece of rubber or plastic tubing (You can buy aquarium tubing from a pet store.)
- Watch with second hand

What To Do

1. Fit the small end of a funnel into one end of the tubing.

2. Take the second funnel and fit its small end into the other end of the tubing.

3. Put the open end of one funnel on your chest, a little to the left of center. Hold the open end of the other funnel to your ear. Sit still and listen to your heartbeat. You might have to move the stethoscope around to find the right spot.

4. Count the number of heartbeats in 15 seconds. Multiply that number by four. That's the number of times your heart beats per minute.

5. Run in place for four minutes. Now count the number of heartbeats in 15 seconds. Multiply that number by four to find out how fast your heart is beating now.

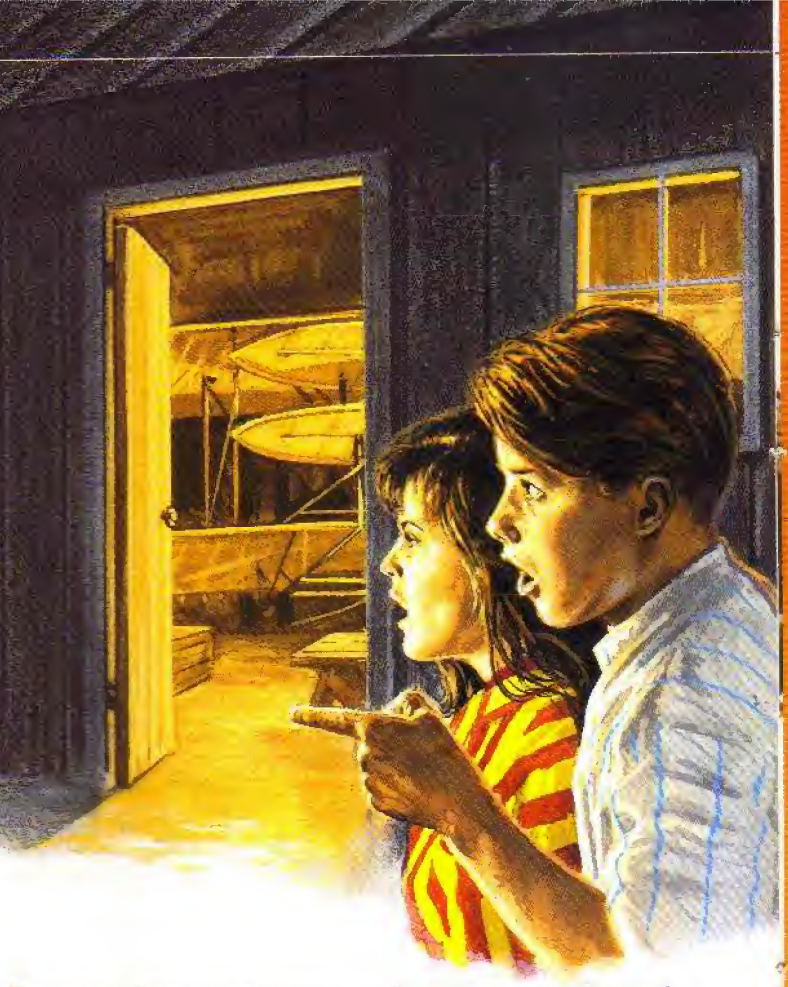
Why It Works

You can't actually hear a heart beat. What you *do* hear is the valves slapping together. (The heart's valves shut off the big blood vessels leaving the heart.) Your stethoscope magnifies this sound. When the valves shut, they make a "lub-dub" noise. Your heart pumps up the volume when you run. That's because it has to work harder to bring more food and oxygen to the muscles. Kids' hearts beat about 100 to 200 times a minute. Adults' hearts thump about 70 to 90 times a minute.

THE TIME TEAM

The Wright Stuff

By Curtis Slepian



"I'm going to Disney World!"

The person who said this wasn't the star player of the NBA champions. It was Sean Nolan.

Sean was waving plane tickets to Orlando in Jenny Lopez's face. "My parents are taking me during vacation. Where are you going?"

Jenny, who wasn't going anywhere, stammered, "I'm going...I'm going on a time trip!"

Sean's grin disappeared. "When?"

"Tomorrow," replied Jenny. "But I'm sure you'll have more fun in Fantasy Land, spinning around inside a giant tea cup."

Sean wasn't too sure about that. Jenny owned the world's only time machine. Her device started out as a science fair project on tachyons—sub-atomic particles that move faster than light. When Sean accidentally dropped her tachyon machine, he jarred the microchips inside. Suddenly, the tachyon machine allowed the teens to travel to the past and future.

Sean hated to miss a single time trip. "Could I come with you before I go to Disney World?"

"Maybe," Jenny said, and walked away.

Next day, Sean came up to Jenny. "Can I time trip with you?"

"I don't know."

"Do you want me to beg?"

"It wouldn't hurt."

"No way."

"Sorry. You can't go."

"Okay, okay. Please take me along!"

"Come to my house at about eight."

That evening, Mrs. Lopez let Sean into the house. He went upstairs to Jenny's room. She took out her tachyon machine. "Ready? 10...9...8..."

"Cut out the drama," said Sean impatiently.

"...321 contact!" Jenny hit the button.

Instantly, the teens were in the woods at night.

Cold Reception

"I'm freezing," said Jenny. She and Sean hadn't worn jackets.

"Let's walk," said Sean. "If we don't run into anything interesting, we can beam home."

Shivering, both teens heard a thundering noise in the distance. Climbing over a hill, they saw the ocean pounding against a long sandy beach. The whole area was empty. "Let's get out of here," said Jenny, her teeth chattering.

"Look," cried Sean. "A house!"

A hundred yards away was a large shed. As they got closer, they heard two people arguing inside.

They tiptoed up to a window and listened:

"I'm sick and tired of you trying to take credit for everything!"

"I am not trying to!"

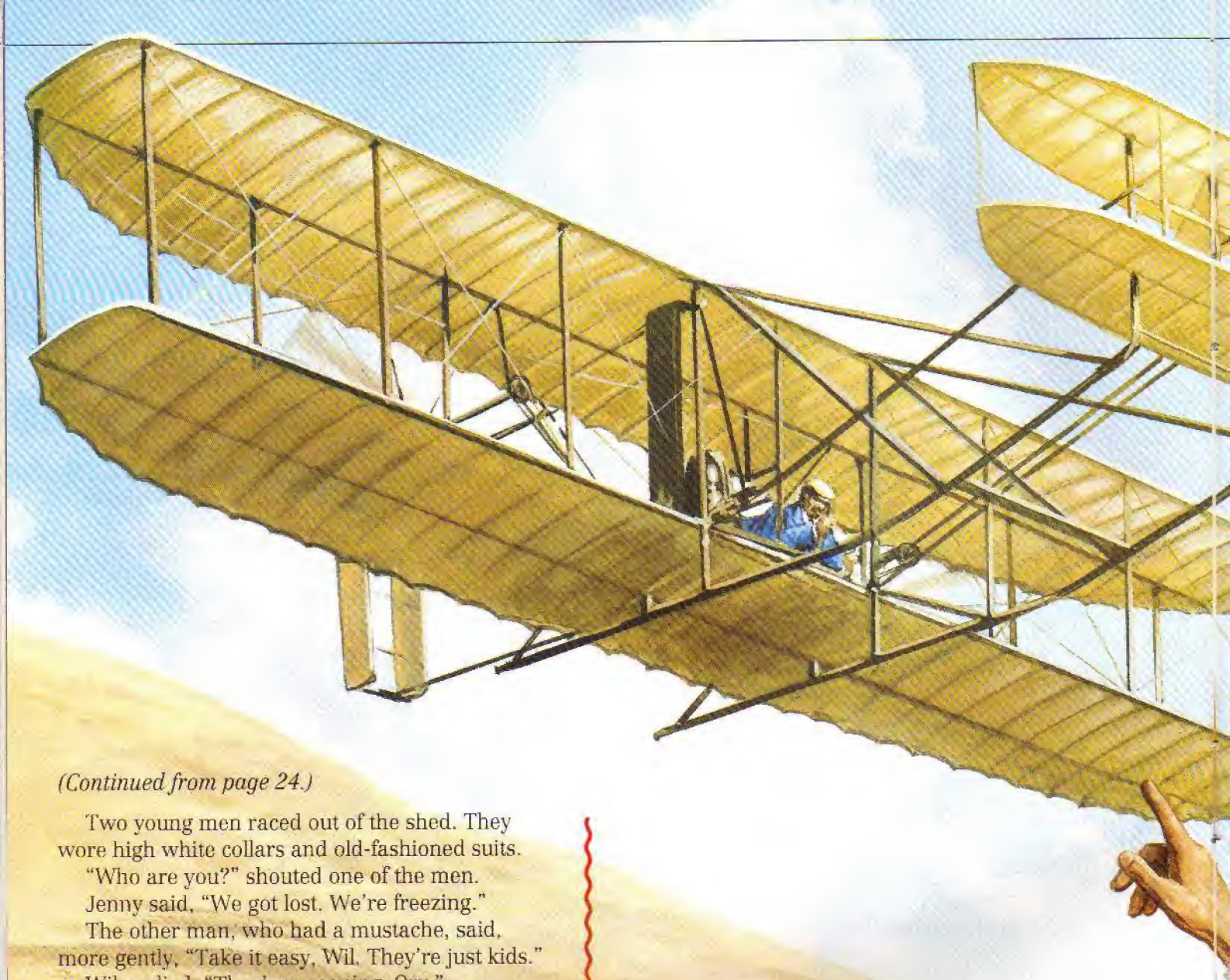
"You are!"

"Am not!"

At that moment, Jenny coughed.

A voice said, "Someone's out there." ☞

(Story continued on page 26.)



(Continued from page 24.)

Two young men raced out of the shed. They wore high white collars and old-fashioned suits.

"Who are you?" shouted one of the men.

Jenny said, "We got lost. We're freezing."

The other man, who had a mustache, said, more gently, "Take it easy, Wil. They're just kids."

Wil replied, "They're snooping, Orv."

Orv said, "Come on in and warm up."

Sean and Jenny entered a room in the shack. Jenny looked around. The walls were covered with diagrams of bird and bat wings. Models of kites and gliders hung on strings. Who were these guys? "What do you do for a living?" she asked.

Orv said, "Back in Ohio we repair bicycles."

Sean smiled. "We're on our vacation."

Wil squinted at them. "You're vacationing in Kitty Hawk, North Carolina, in December?"

Oh, Brother!

A bell went off in Jenny's head. Kitty Hawk? Wil and Orv? Gliders? "Is this 1903?"

Orv laughed. "I'm glad the cold hasn't frozen your wits. Yes, it's 1903."

Jenny glanced quickly at Sean. He shrugged his shoulders. "Sean is such an airhead," she thought. She pointed to Orv. "Your name is Orville, isn't it? And you're Wilbur."

The two men looked at each other.

Sean scratched his head. How did Jenny know their names? Was she some kind of mystic?

Wilbur wasn't smiling. "Yes, we're the..."

"Wright brothers," shouted Jenny.

"Right brothers?" said Sean. "Then who are the wrong brothers?"

Jenny rolled her eyes. She went over to Sean and whispered, "They invented the airplane!"

"Oh, *those* Wright brothers," he exclaimed. "Cool! Can we see your excellent airplane?"

"How did you know about my flying machine?" asked Wilbur.

"What do you mean 'my' flying machine?" roared Orville. "It's *our* flying machine."

"My little brother is always worried he's not getting enough credit," chuckled Wilbur.

"Little brother?" shouted Orville. "I'm bigger than you are."

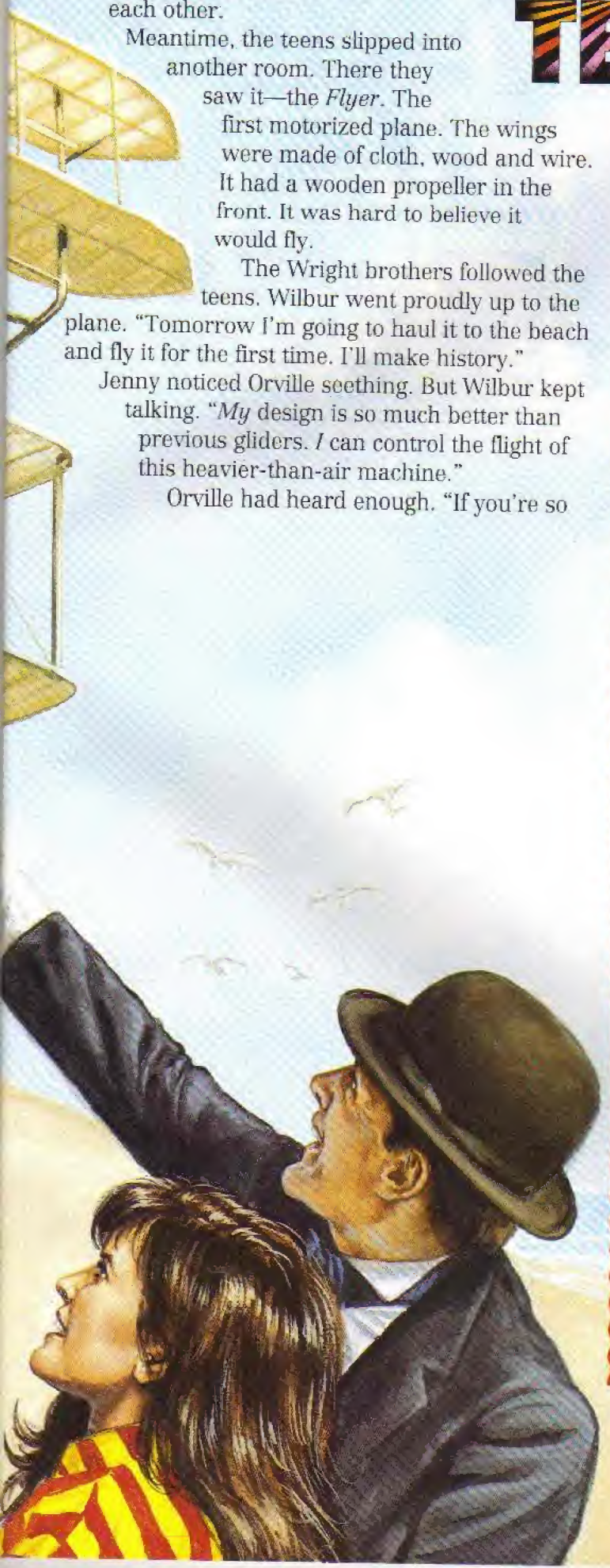
The brothers began yelling at each other.

Meantime, the teens slipped into another room. There they saw it—the *Flyer*. The first motorized plane. The wings were made of cloth, wood and wire. It had a wooden propeller in the front. It was hard to believe it would fly.

The Wright brothers followed the teens. Wilbur went proudly up to the plane. "Tomorrow I'm going to haul it to the beach and fly it for the first time. I'll make history."

Jenny noticed Orville seething. But Wilbur kept talking. "*My* design is so much better than previous gliders. *I* can control the flight of this heavier-than-air machine."

Orville had heard enough. "If you're so smart, try flying the plane yourself. I'm not helping you." With that, he stormed out.



Taking Off

They all followed him back into the living room.

"Please, Orville," pleaded Wilbur. "You've got to help. I can't fly it myself."

"I'm going back to Ohio. I'm finished flying."

Wilbur turned away. "Who needs you? I'll become rich and famous by inventing new types of bicycles."

"This is terrible," said Jenny quietly to Sean, making sure the Wright brothers couldn't hear her. "They've got to fly that plane. Or it will screw up the whole future history of aviation."

"Oh, what's the big deal?" said Sean.

"Are you still going to Disney World?" asked Jenny.

"Sure," said Sean.

"How are you getting there?"

"By plane."

"If they don't fly, there may not be jet planes around when we return to the present."

Jenny spoke to the Wright brothers. "If you fly your plane, the future will be much better. One day, I bet planes will fly to cities everywhere."

"Yeah," broke in Sean, "and there'll be airports with souvenir shops."

"Airplanes will deliver the mail incredibly fast," said Jenny.

"You'll be able to see in-flight movies," exclaimed Sean.

"People will reach far-away countries in hours," Jenny added.

And Sean said, "One day, meals will be served on planes—your choice of two entrees!"

Orville scratched his head. "Maybe we should fly our plane after all."

Orville put his arm around Wilbur, who said, "Tomorrow, I...I mean, *we*...fly."

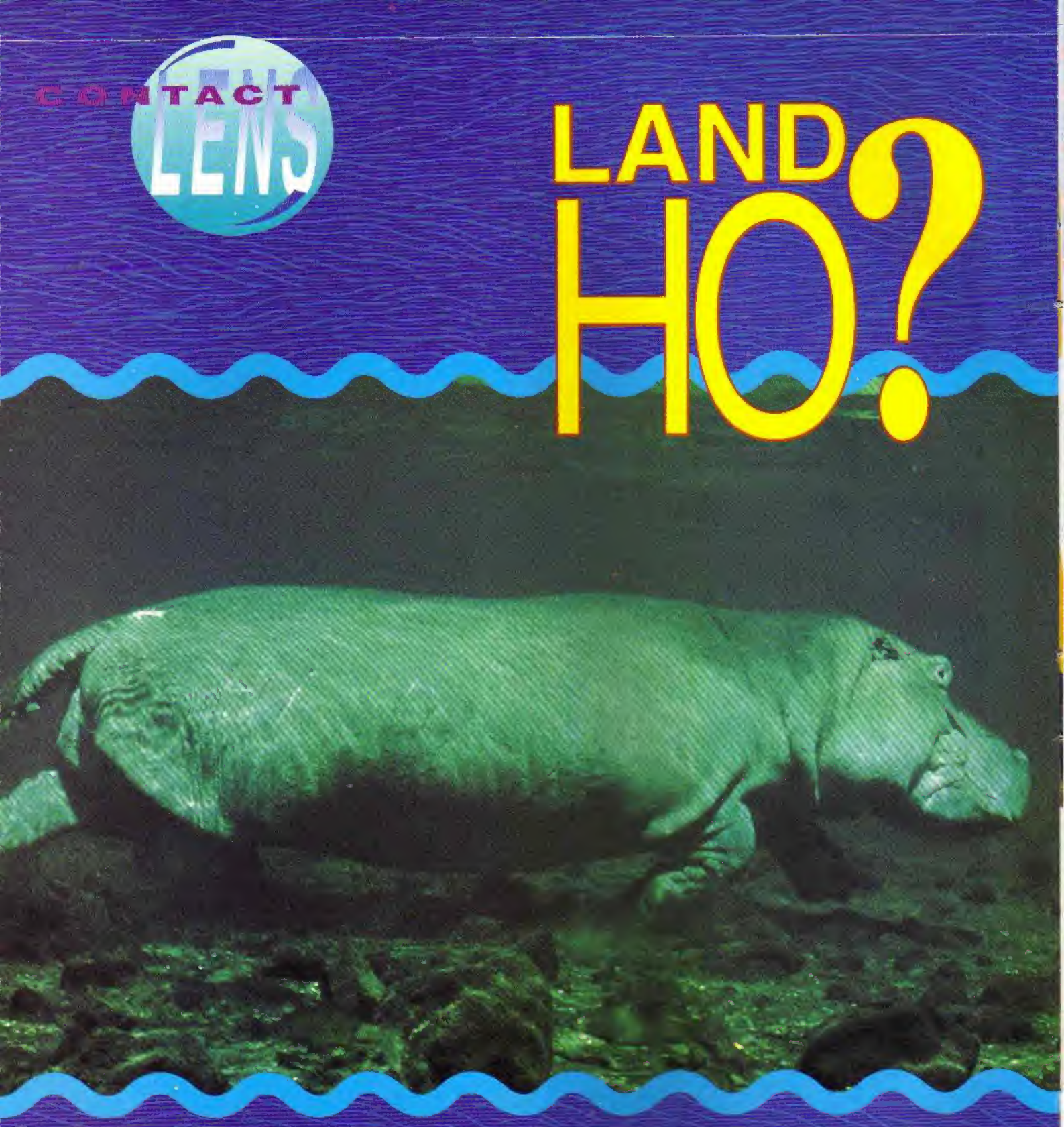
The next morning, on December 17, 1903, Sean and Jenny went out to the beach at Kitty Hawk. As they watched, Orville climbed into the *Flyer*. He lay on his stomach and held the controls. The plane began to move forward. Then it rose about 10 feet in the air, going forward a few hundred feet before it came back to Earth.

"It was in the air only 12 seconds," said Jenny. "But it was 12 seconds that will change the world. Now let's go home. You've got a plane to catch!" ◆

ILLUSTRATIONS BY BOB LARKIN

CONTACT LENS

LAND HO?



Don't hold your breath waiting for this hippo to come up for air. Hippos don't have to take a lot of breathers. A normal dive lasts from one to five minutes. But hippos have been known to stay under water for up to 30 minutes!

Hippos can't float. So they have no problem walking along the bottom of a river. When a hippopotamus surfaces, it blasts a lungful of stale air out of its nostrils—just like a whale clearing its blowhole.

In fact, scientists think hippos and whales are a lot alike. Like whales, hippos have a thick layer of blubber and are almost hairless.

But unlike whales, they have a built-in sunscreen. Glands in the hippo's skin make a red, oily fluid that actually blocks out ultraviolet light. And it's a good thing. Just think of the whopper sunburn it would have!

PHOTO: ALAN & JOAN ROOT/SURVIVAL ANGLIA

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FACT

The world's largest flower is the Rafflesia arnoldi—it can grow to the size of an umbrella.

Rockets were first made by the Chinese over 750 years ago.

ILLUSTRATIONS BY CHARLES PEALE

The average human brain weighs three pounds.

OIDS

During the Middle Ages (the years 500 to 1500), people used spider webs to try to cure warts.

In Australia, a hurricane is called a willy-willy.

After bananas, a gorilla's favorite food is celery.

Have a Ball!

For each of the first two beach balls, can you figure out how the outer numbers were used to get the middle number? After you've figured it out, fill in the middle number in the last beach ball.

See Creatures

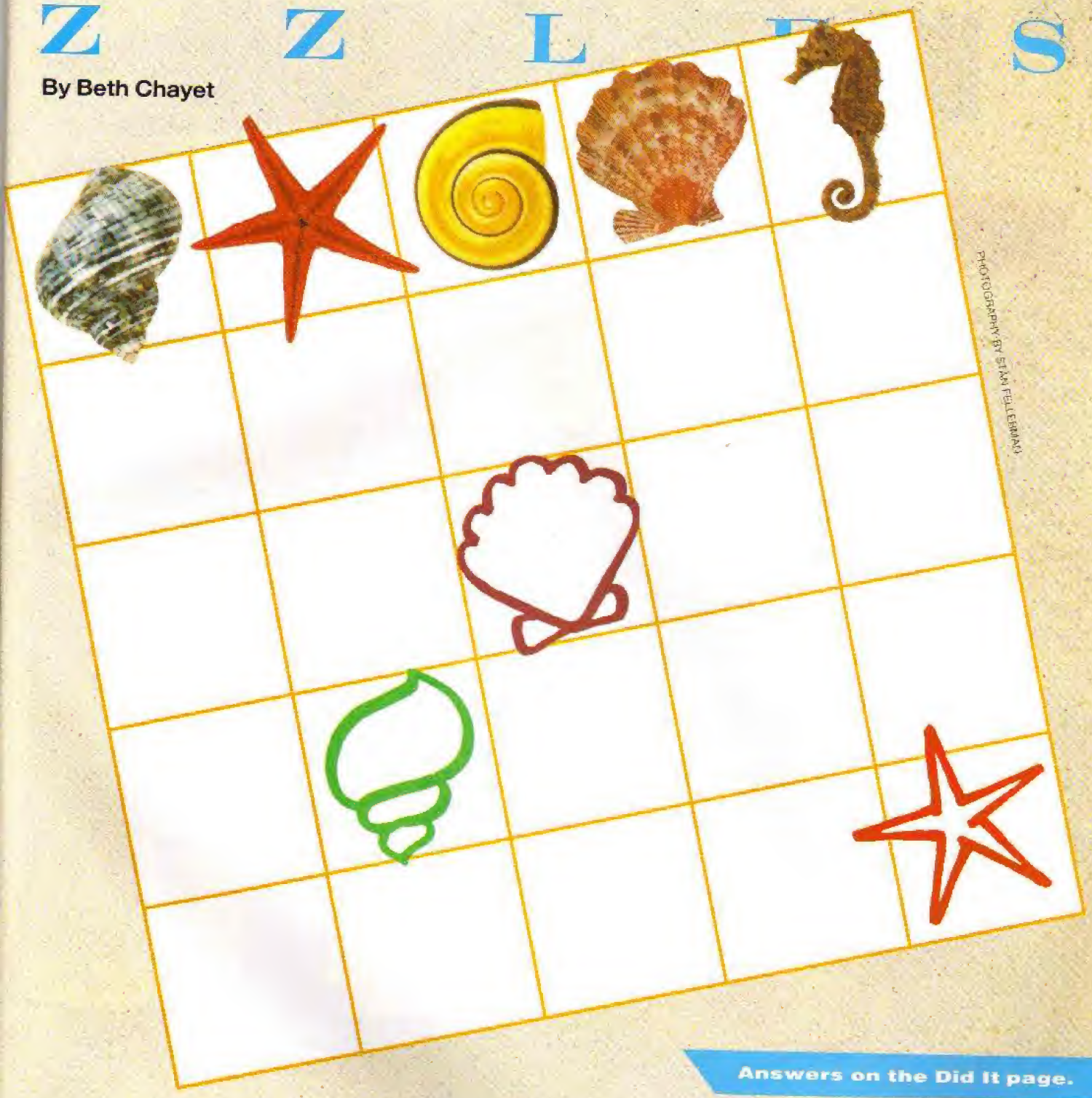
Using the five sea animals at the top of the grid, fill in all the squares (one animal per square). Sounds simple. But here's the catch: All five different sea creatures must appear in each horizontal, vertical and diagonal row. To help you get started, we've filled in a few squares.

Made in the Shade

Who owns each pair of glasses? The pair of sun glasses Beth wore is next to the pair Bob wore. But Beth's glasses are not next to John's. If John's glasses are not next to Curtis's glasses, then whose glasses are?

Z Z L S

By Beth Chayet



PHOTOGRAPHY BY STAN FELLERMAN

Answers on the Did It page.

BICYCLE GLASSES COURTESY PRADA, 48 ST. NYC.

MATHNET Detective

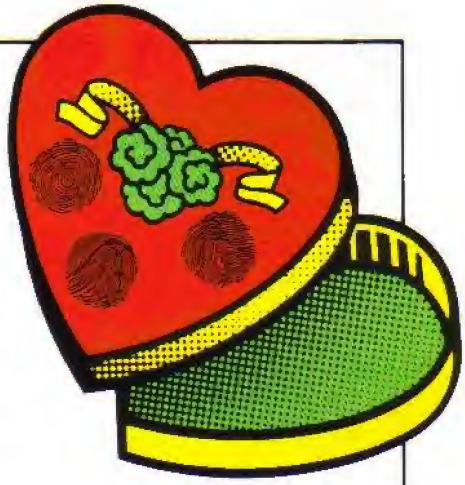
By Marvin Miller

Sticky Fingers

Stacy invited five friends to a birthday party at her house. After dessert, she showed off her pearl necklace—a present from her grandmother.

At 9:00 P.M., Stacy and all her friends went out to a dance club. Stacy was at the club for more than three hours. She was the last to leave. When Stacy returned home, she found her necklace had been stolen.

Stacy immediately called the police, and they dusted her empty jewelry box for fingerprints. They found three fingerprints on the box (right).

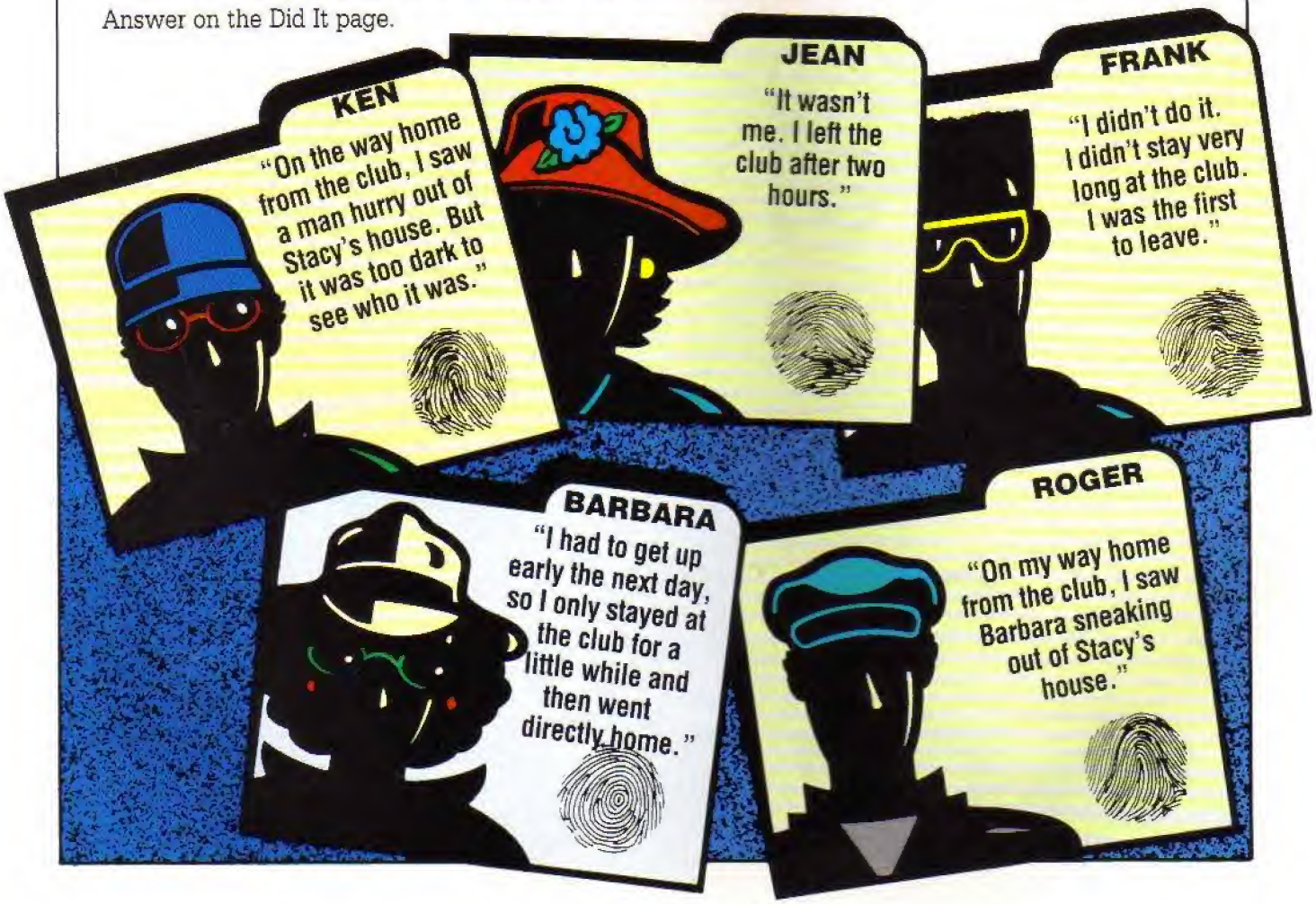


One of the three prints was made by the thief, who had stolen the necklace while Stacy was at the club. The other two prints were made earlier at her party, when two friends had picked up the box to admire the necklace.

Below are statements given to the police by the five persons at Stacy's party. Each person's fingerprint is next to his or her statement. Only one person is lying, and that person is the thief.

WHO STOLE STACY'S PEARL NECKLACE?

Answer on the Did It page.



Flim Flam Ads

Buyers beware! The products advertised here sound great—but are they? For example, the Universal Coat Hanger seems like a bargain. Until you find out that the hanger is just a nail! Below are eight other real ads that were meant to fool people. Can you guess what each one is *really* offering?

Answers on the Did It page.

ILLUSTRATIONS BY JACK TOM

Programs For Your Computer

THE WINNER'S CIRCLE

For IBM and Apple II computers

Play this horse-racing game with friends. You'll amaze them by picking the winner every time.

Each race has eight horses, but the winner is always the horse who's number is six more than the number of the race. For example, in race number one, the winner will be horse number seven (6+1=7).

To pick the winner, look on the screen and see what number race it is. Start with that number horse, then count ahead six places. If you come to the end of the list, just start at number one again. So if it's race number three, then the winner will be horse number one.

This game is written for the IBM and compatibles. To use it on Apple II machines, change all CLS statements to HOME and delete line 20 RANDOMIZE TIMER.

```
 10  REM RACETRACK
 20  RANDOMIZE TIMER
 30  FOR X=1 TO 8
 40  READ A$:H$(X)=A$:NEXT X
 50  FOR X=1 TO 8
 60  READ A$:OD$(X)=A$:NEXT X
 70  FOR X=1 TO 5
 80  READ A$:G$(X)=A$:NEXT X
 90  R=0
100  R=R+1
110  FOR X=1 TO 8
120  H(X)=0:J$(X)=""
130  NEXT X
140  CLS
150  PRINT "WELCOME TO RACE
     TRACK"
160  PRINT "RACE #" ; R
170  PRINT "HERE ARE THE
     HORSES AND THE ODDS"
180  FOR X=1 TO 8
190  Y=INT(RND(1)*8)+1
200  IF H(Y)=1 THEN 190
210  H(Y)=1:J$(X)=H$(Y):J(X)=Y
220  Z=INT(RND(1)*8)+1
230  K$=OD$(Z)
240  PRINT X;") ";J$(X);"  ";K$
250  NEXT X
260  W=R+6:IF W>8 THEN W=W-8
270  W$=J$(W)
280  PRINT:PRINT "PLAYER #1 —
     CHOOSE YOUR HORSE"
290  PRINT "ENTER NUMBER 1-8"
300  INPUT C$
310  IF C$="9" THEN CW=1:GOTO 280
320  IF C$="Q" THEN CW=1:GOTO
     280
330  C=VAL(C$): IF C<1 OR C>8
     THEN 280
340  D(1)=C:IF CW=1 THEN
     W$=J$(C)
350  CW=0
360  PRINT: PRINT "PLAYER #2 —
     CHOOSE YOUR HORSE"
370  PRINT "ENTER NUMBER 1-8"
380  INPUT C$
390  IF C$="9" THEN CW=1:GOTO 360
400  IF C$="Q" THEN CW=1:GOTO
     360
410  E=VAL(C$):IF E<1 OR E>8
     THEN 360
420  IF E=C THEN PRINT "SORRY,
     ALREADY CHOSEN":GOTO 360
430  D(2)=E:IF CW=1 THEN W$=J$(E)
440  CW=0
450  CLS:PRINT "THE HORSES ARE
     IN THE GATE"
460  FOR DE=1 TO 2000:NEXT DE
470  PRINT:PRINT "AND THEY'RE
     OFF!"
480  GOSUB 880
490  GOSUB 790
500  PRINT:PRINT "IT'S  ";L$(1); " IN
     THE LEAD, WITH ";L$(2);" BACK
     BY ";F$(1)
510  PRINT "FOLLOWED BY ";W$;"
     ,";L$(4);" AND ";L$(5);" BACK BY
     ";F$(2)
520  FOR DE=1 TO 21000:NEXT DE
530  CLS:PRINT "THEY'RE GOING
     INTO THE TURN AND IT'S
     ";L$(1);" AHEAD BY ";F$(3)
540  PRINT "THEN ";L$(3);", ";L$(2); ",
     ";W$;" AND ";L$(5)
550  FOR DE=1 TO 21000:NEXT DE
560  CLS:PRINT "IN THE BACK-
     STRETCH IT'S ";L$(1);"  AND
     ";L$(3);" NECK AND NECK"
570  PRINT L$(5);" IS BACK BY A
     LENGTH WITH ";W$;" , ";L$(7); "
     AND "
580  PRINT L$(4);" BACK BY ";F$(4)
590  FOR DE=1 TO 21000:NEXT DE
600  CLS:PRINT "COMING AROUND
     THE TURN IT'S ";W$;" , ";L$(3);"
     AND ";L$(1)
610  PRINT "AHEAD OF ";L$(7);" BY
     ";F$(4);" THEN ";L$(6);" AND
     ";L$(4)
620  FOR DE=1 TO 21000:NEXT DE
630  CLS: PRINT "AND IT'S ";W$;" BY
     ";F$(5);"!"
640  PRINT "FOLLOWED BY ";L$(3);"
     WITH ";L$(1);" THIRD"
650  PRINT
660  IF W$=J$(D(1)) THEN 730
670  IF W$=J$(D(2)) THEN 700
680  PRINT "NEITHER PLAYER
     PICKED THE WINNER"
690  GOTO 750
700  PRINT "CONGRATULATIONS,
     PLAYER NUMBER 2"
710  PRINT "YOU PICKED THE
     WINNER!"
720  GOTO 750
730  PRINT "CONGRATULATIONS,
     PLAYER NUMBER 1"
740  PRINT "YOU PICKED THE
     WINNER!"
750  PRINT:PRINT "PLAY AGAIN? Y/N"
760  INPUT A$
770  IF A$="Y" THEN 100
780  END
790  FOR X=1 TO 7
800  Y=INT(RND(1)*8)+1
810  IF J$(Y)=W$ THEN 800
820  IF L(Y)=1 THEN 800
830  L$(X)=J$(Y):L(Y)=1
840  Y=INT(RND(1)*5)+1
850  F$(X)=G$(Y)
860  NEXT X
870  RETURN
880  FOR X=1 TO 8
890  L(X)=0:NEXT X
900  RETURN
910  DATA LEG O'LAMB, SURE
     THING, ROAD RUNNER,
     STEWBALL
920  DATA SORE FEET, SEA
     BISCUIT, EQUIPOISE, MR. ED
930  DATA 15-1,6-5,40-1,3-1,2-1,5-1,3-
     2,9-1
940  DATA A NOSE, A LENGTH,
     TWO LENGTHS, THREE
     LENGTHS, FOUR LENGTHS
```

TIME OUT

A Baseball Puzzle

3-5-6-6-2-6-2-3-10-5-4-3-5-5-9-4-7-4-7
EHTTS RIF YTNEWTE LP OEPOT
TRO PEROTE HTNOI SSECN OCDN ATS
RA ENEH TTHG IRDLE IF SREHC AELB
LL IWEV IECER EE RFNRO CPOP.

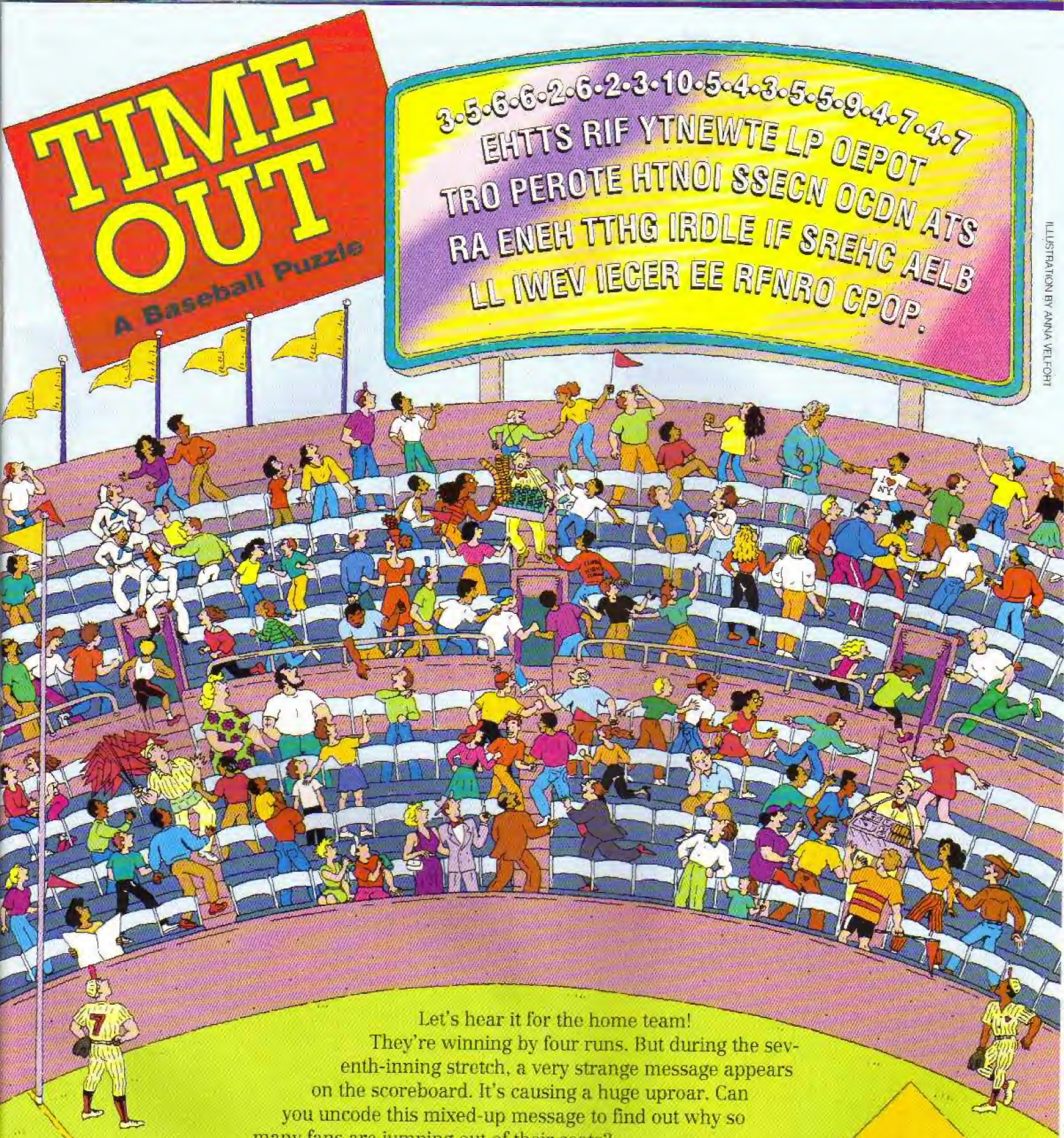


ILLUSTRATION BY ANNA VELFORT

Let's hear it for the home team! They're winning by four runs. But during the seventh-inning stretch, a very strange message appears on the scoreboard. It's causing a huge uproar. Can you uncode this mixed-up message to find out why so many fans are jumping out of their seats?

To break the code, look at the numbers. They will tell you how many letters to read backwards at one time. For example, the first number is three. That tells you to take the first three letters of the message and read them backwards. (The word is "THE.") Keep doing this for each number and group of letters. Once you're finished, the answer should pop up!

The answer appears upside down at left.

Answer: The first twenty people to report to the concession stand near the right field bleachers will receive free popcorn

Watch the Square One TV Mathnet special: "The Unnatural." It's airing June 3 on your local Public Television Station. Check your local TV listings for the time.

EXTRA!

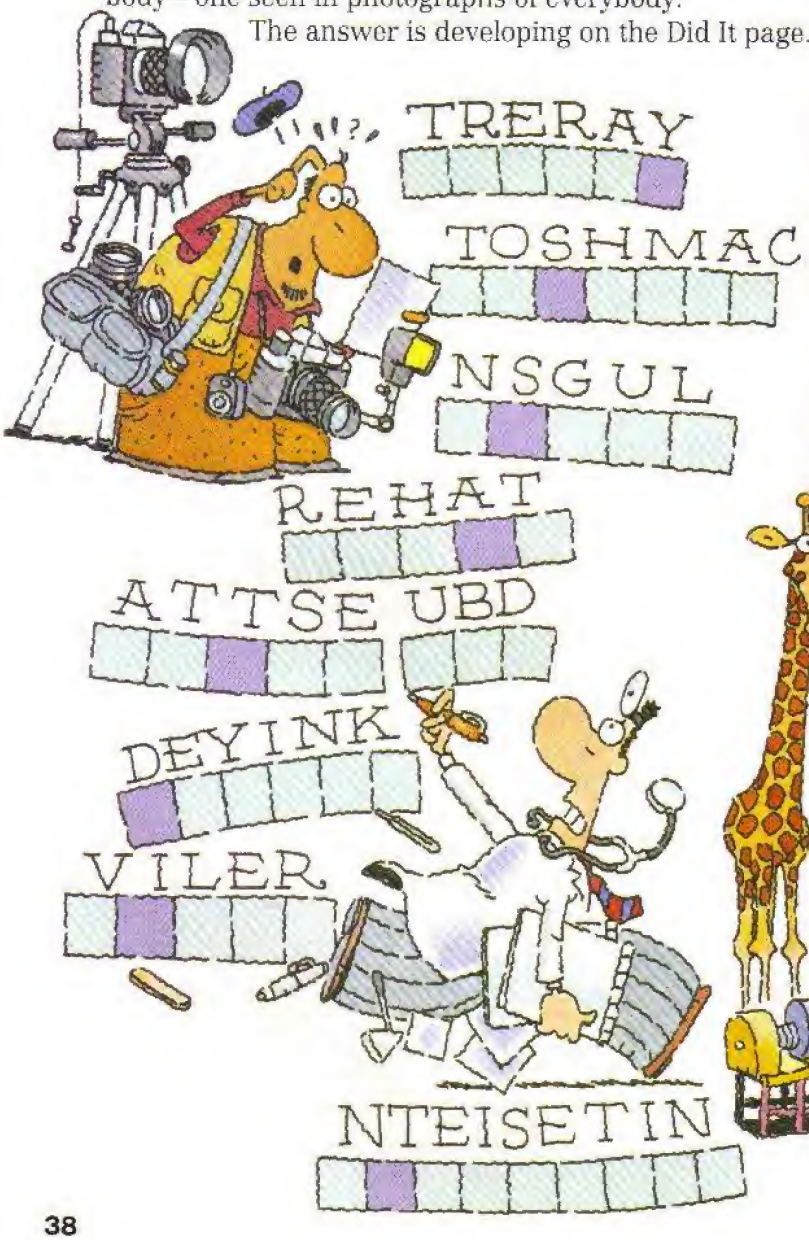
By Beth Chayet

MEDICAL MIX-UP

Dr. Jumble gave the medical lab a list of body parts he wanted photographed. But because he was in a hurry, Dr. Jumble bumbled. Here's how his list turned out.

Unscramble each body part and write its correct name in the boxes below it. The letters in the shaded boxes will spell out the largest organ of the human body—one seen in photographs of everybody.

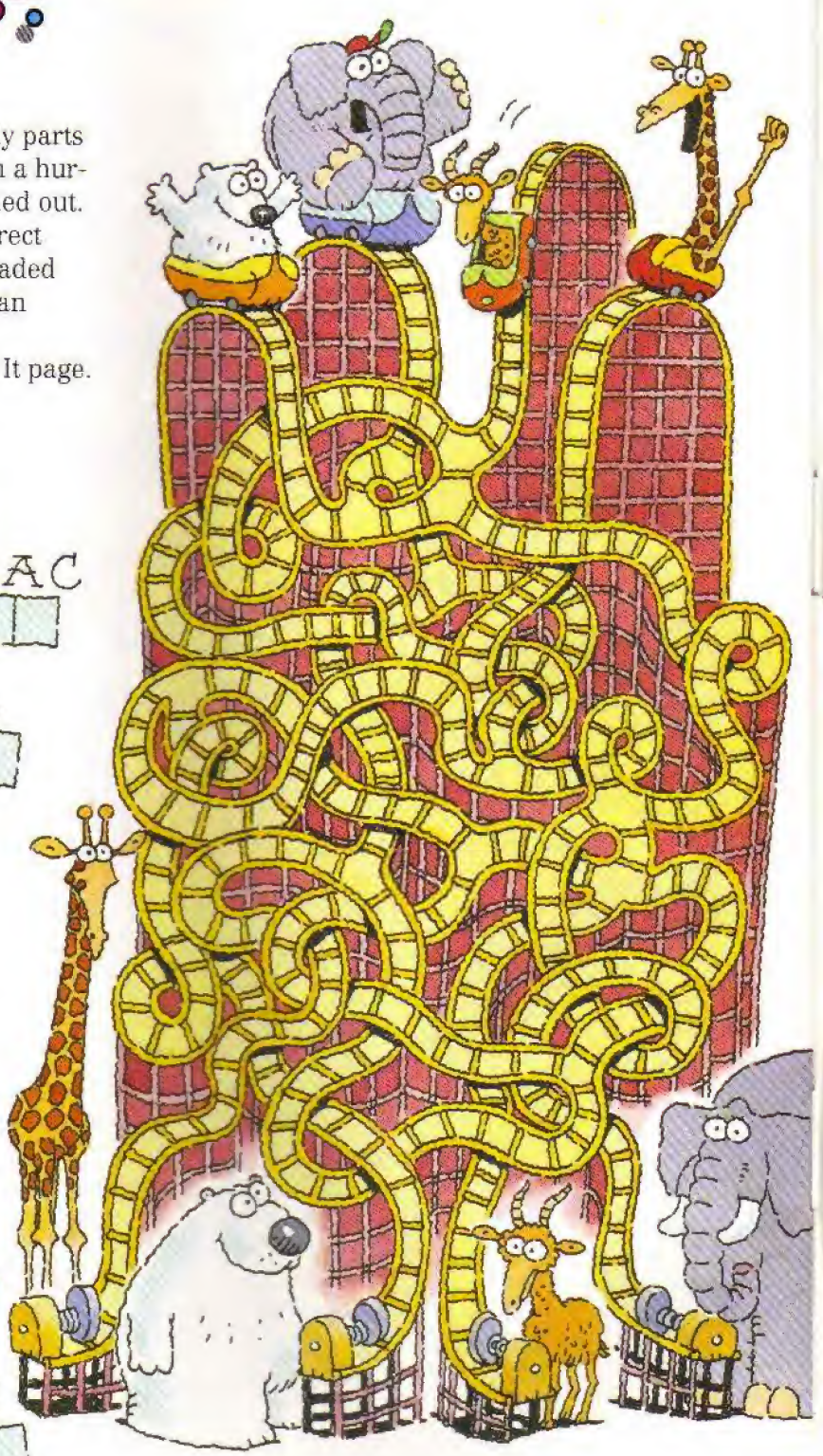
The answer is developing on the Did It page.



WILD RIDE

Animals like to play. But this group of beastly buddies got carried away—all the way to the top of a roller coaster! Can you get them on the right track so each ends up with its mom or pop?

Coast to the Did It page for the answer.



ARTIFACTS ON ICE

When hikers in Austria discovered Otze, they also found these objects near his body: BAG, ARROW, CAPE, BOW, STONE, FUR and AX. Can you find those same objects, hidden in the sentences below? We did the first one to get you started.

Uncover the answers on the Did It page.

FOR ABOUT 5,000 YEARS, OTZE'S BODY WAS PRESERVED IN A NARROW CRACK OF A MELTING GLACIER.

FURTHER RESEARCH MAY GIVE US CLUES ON HOW ANCIENT PEOPLE LIVED.

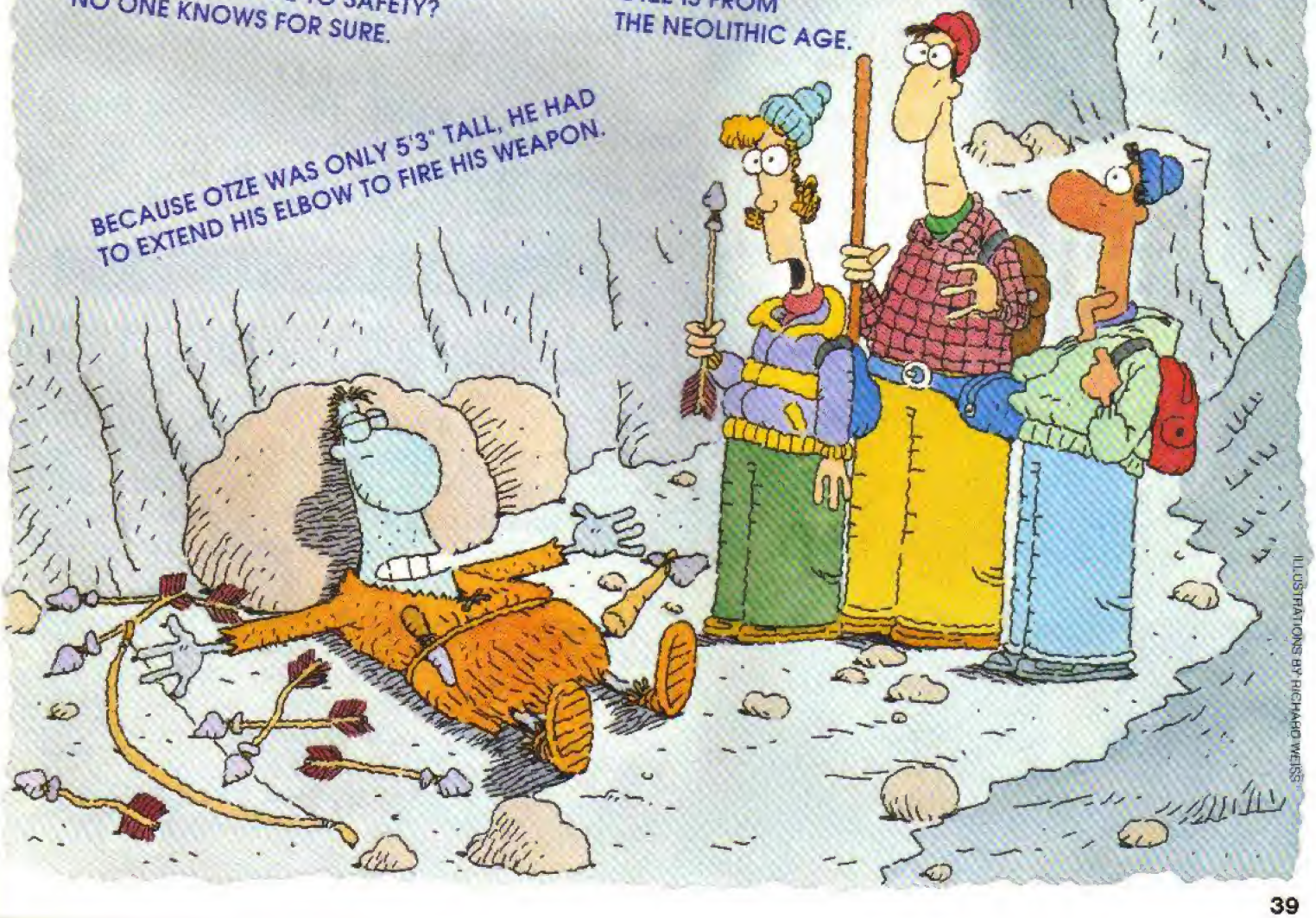
UNDER THE PRESSURE OF THE ICE, OTZE'S BODY TURNED INTO A WAX-LIKE MATERIAL.

THE NEOLITHIC-AGE BODY IS THE FIRST ONE TO BE FOUND IN SUCH GOOD CONDITION.

WHY WAS OTZE IN THE MOUNTAINS? WAS HE HUNTING? OR WAS HE TRYING TO ESCAPE TO SAFETY? NO ONE KNOWS FOR SURE.

SCIENTISTS AT THE INNSBRUCK LAB AGREE THAT OTZE IS FROM THE NEOLITHIC AGE.

BECAUSE OTZE WAS ONLY 5'3" TALL, HE HAD TO EXTEND HIS ELBOW TO FIRE HIS WEAPON.



ILLUSTRATIONS BY RICHARD WEISS

Did it

HAVE A BALL!

To get the middle number of a ball, multiply the four outer numbers by each other. (For example: 2x4x2x1=16.) The middle number of the last ball is 90.

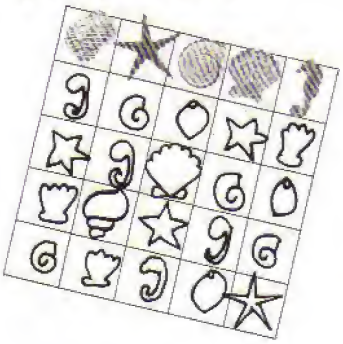
MADE IN THE SHADE

The owners of the glasses (from left to right) are Curtis, Beth, Bob and John. So Beth's glasses are next to Curtis's glasses.

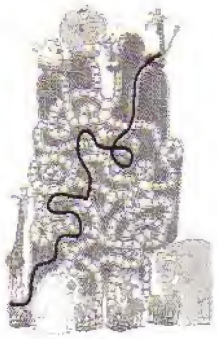
STICKY FINGERS

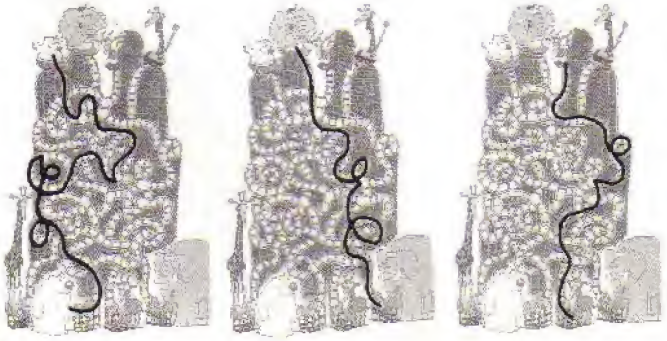
The prints on the jewelry box belong to Barbara, Frank and Roger. That eliminates Ken and Jean from suspicion. Since Barbara's and Roger's stories don't match up, one of them is lying—and must be the thief. Ken said he saw a man coming out of Stacy's house. So the thief must be Roger. (Why believe Ken? Since he can't be the thief, he can't be a liar.)

SEE CREATURES



WILD RIDE





MEDICAL MIX-UP

Artery, stomach, lungs, heart, taste bud, kidney, liver, intestine.

Your body's largest organ is: your skin.

FLIM FLAM ADS

Presidential Plaque: Lincoln penny. Cheap Silk: spool of silk thread. Painless Dentistry: pencil and blank sheet of drawing paper. Model Boat Kit: block of wood, knife and picture of a boat. Solar Clothes Dryer: clothesline and clothespins. Food Server: spoon. Fly Killer: rolled up newspaper. Art Prints: postage stamps.

ARTIFACTS ON ICE

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OOPS!

We sprung a spring in the March issue. The correct answer for the puzzle "Spring Flowers" is: The middle flower blooms first—on May 1. The other two bloom on May 2 and May 3.

NEXT MONTH

You'll have it made in the shade with our July/August summer fun issue of CONTACT:

SCHOOL'S OUT

Pilot a plane! Scuba dive in coral reefs! Ride a pack horse along the Oregon Trail! It doesn't sound like kid stuff—but it is. Read about the neat adventures some kids have on their summer vacation.

SHARK ALERT!

Sharks are swimming for their lives—from humans. Learn why fishermen are threatening these 400-million-year-old creatures. And what's being done to make it safe for them to be in the water again.

AND MUCH, MUCH MORE!

Dancing Dreams

The beautiful bunny ballerinas have become legends in the world of ballet. As best friends growing up they had always dreamed of becoming prima ballerinas. So, with their great love of ballet and years of devoted practice, they made their dream come true. They now dance with the corps de ballet a la bunnies, dazzling audiences and inspiring everyone who has a dream of their own.

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Fashion "See-Thru" Phone
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SELL

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SELL 14 ITEMS

own Calligraphy Marker Set
SELL 8 ITEMS

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SELL 9 ITEMS

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SELL

"Wiz" Personal Locker
SELL 13 ITEMS

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Gund Plush "Scraps"

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